Strategic Skills Initiative Skills Shortage ID Report
Cover Sheet

Economic Growth Region # 10: "Southern 7"

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OCCUPATION AND SKILLS SHORTAGES REPORT

Region 10

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Executive Summary

Key Industries

Region 10's Key Industries were determined to be Healthcare, Manufacturing, and to a more limited degree logistics.

Critical Occupations

A number of healthcare occupations were deemed to be both critical and in shortage (or projected to be in shortage) based on the average length of time to fill positions (ERISS survey), employer responses (Region 10 local survey), and employer comments (Region 10 forum). Those occupations and there SOC codes are:

- Registered Nurses 29-1111
- Licensed Practical Nurses 29-2061
- Radiological Technicians 29-2034
- Respiratory Therapists 29-1126
- Occupational Therapists 29-1122
- Pharmacists 29-1051
- Physical Therapists 29-1123
- Labratory Techs (Medical & Clinical) 29-2012

The following manufacturing and logistics occupations were reasoned to be both critical and in shortage (or projected to be in shortage) based on the average length of time to fill positions (ERISS survey), employer responses (Region 10 local survey), and employer comments (Region 10 forum).

- First-line Supervisors/Managers 51-1011
- Industrial Engineering Techs 17-3026
- Computer Techs (support specialists) 15-1041
- Welders, Cutters, Solders, & Brazers 51-4121
- Industrial Maintenance Technicians 49-9041
- Machinists (Metal & Plastic) 51-4041
- Inspectors, Testers, Samplers 51-9061

- Packaging & Filling Machine Operators 51-9111
- Production Workers – Other 51-9199
- Truck Drivers – CDL (Heavy Tractor-Trailer) 53-3032

The participation and endorsement of the Regional Consortium

In order to build a representative consortium of employers representing the health care, manufacturing and logistics sectors, a number of existing lists were reviewed and companies were culled from said lists to for the Consortium List. Existing lists reviewed included the following:

- Southern Indiana Chamber of Commerce Directory
- Southern Indiana Economic Development Council Directories
- ERISS Survey List
- Scott County Economic Development Corporation Listings
- Washington County Economic Growth Partnership Listings
- Harrison County Chamber of Commerce Listings
- Crawford County Economic Development Council Listings
- WorkOne Southern 7 Top 100 Listing & Satisfaction Survey Mail List

Section 1: Goal and Methodology

Goal

In June of 2005, Governor Mitch Daniels, in conjunction with the Indiana Department of Workforce development (IDWD), introduced the Innovating Indiana Strategic Skills Initiative. With this initiative Indiana is addressing the need for strategic investment in the skills of its workforce and such an investment is necessary if Indiana to maintain a competitive advantage in an increasingly global economy. Recognizing that this requires policies and conditions that ensure and sustain a high level of per capita income and continued growth, the Strategic Skills Initiative's (SSI) primary goal is to identify current and projected key skill gaps and identify appropriate resolutions for these gaps.

This is the first of three reports to address the objectives of the SSI for our region. The goal of the Occupation and Skills Shortages Report is to identify shortages in critical occupations and skills that could hamper the development of our region's key industries. For purposes of the SSI, an industry is "key" to a region if it possesses one or more of the following characteristics:

- It employs a large number of workers.
- It accounts for a large share of the income generated in the region.
- It's an industry in which the region tends to specialize and one that enjoys a strong competitive advantage compared to other regions.
- Economic developers have targeted it for the region's future economic growth.

To ensure that we are also looking forward, the final criteria would allow the inclusion of an industry even if it doesn't currently have a large presence. Clearly, the more of the above characteristics that an industry possesses the more key that industry is.

In order for an occupation or cross-cutting skill set to be targeted for the solutions phase it must be considered "critical" to the growth and/or competitiveness of an identified key industry. In addition to being critical to an industry the occupation or skill set must also:

- Demonstrate strong employment demand for the occupation.
- Provide good earnings and benefits.
- Be appropriate for targeting by the workforce system.

In the following pages a logical, demand-driven methodology will be employed that starts with the identification of Region 10's key industries, leads to the identification of critical occupations and skills, and finally identifies short and long-term occupational shortages and skills gaps.

Data and Methodology

The methodology employed follows closely that recommended in the original Request for Applications for the SSI, the SSI Research & Identification Guidebook, and the guidance provided by Dick Judy and Brian Hartz at Workforce Associates through a series of six online workshops. The primary methodology involved answering the set of demand and supply-side questions regarding industry and employment as provided in the guidance. This includes the utilization of the supplied data from the SSI toolkit, links to additional data and studies provided on the SSI web-site, data supplied in spreadsheet form by the Indiana Business Research Center (IBRC), the ERISS survey, localized surveys and forums, and various other sources including the U.S. Bureau of Labor Statistics and the U.S. Department of Labor's Occupational Information Network (O*NET). Throughout the body of this report additional information on other studies, data, methodologies and sources that were utilized are cited as they are referred to.

Section II: Selection and Definition of Key Industries

In this section, the steps taken to select Region 10's key industries will be presented and clear evidence will be provided as to why the selected industries are considered essential to the region. The identification of key industries is a prerequisite for determining critical occupation and/or skills shortages and involves answering the following eight questions:

1. Which industries in the EGR employ the greatest number of workers?
2. Which industries pay the best?
3. Which industries have been growing the fastest, in jobs? In numbers of establishments? In average weekly wages?
4. Which industries will be offering the greatest number of new jobs in the next few years?
5. In which of our industries do we now have the greatest competitive advantage?
6. Which industries seem to be building strong competitive advantage for the future?
7. Which of our industries are positioned to capitalize on regional, national and/or global growth trends?
8. Which industries have been targeted by state and/or local economic development experts for future growth?

Once these questions are answered the specific employers in the selected industries can be identified along with further information including how many workers they employ and their annual sales levels. These employers will be targeted for assistance in the determination of critical occupations and potential occupational and/or skills shortages their industry may be facing.

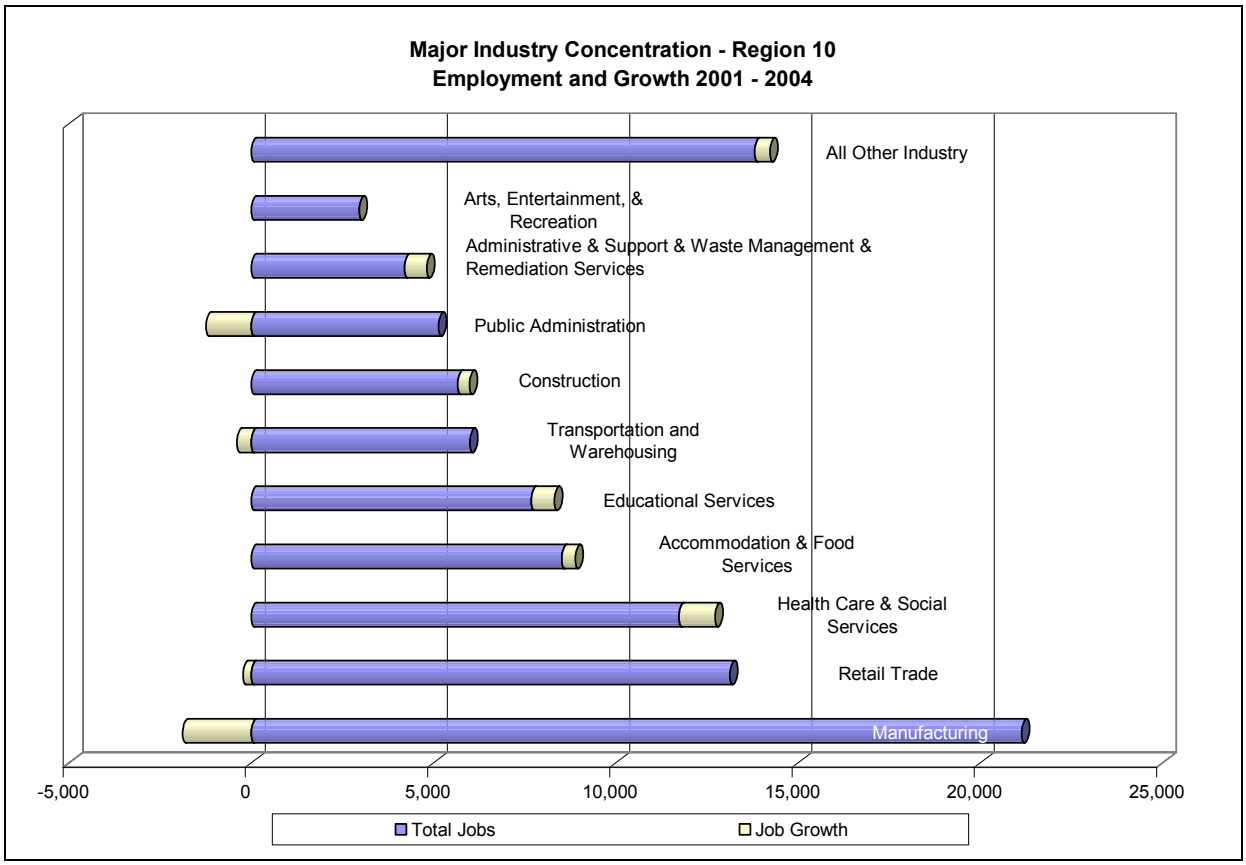
Industry Employment and Job Growth

Figure 1 on the following page shows the employment levels in Region 10 by industry at the two-digit NAICS[1] level. The graph shows both current employment (number of workers

[1] NAICS stands for the North American Industrial Classification System. It is a means of classifying an industry and the number of digits relates to the level of specificity. For example, a 2-digit NAICS code for manufacturing is 33, but the 3-digit code for transportation equipment manufacturing is 336 as this industry is a sub-set of manufacturing.

employed) and job growth from Quarter 4, 2001 to Quarter 4, 2004. It comes as no surprise that manufacturing is a dominant sector in Region 10 (approximately 21% of total employment in 2004, Quarter 4) as it is for the entire state.

Figure 1: Employment and job growth by industry



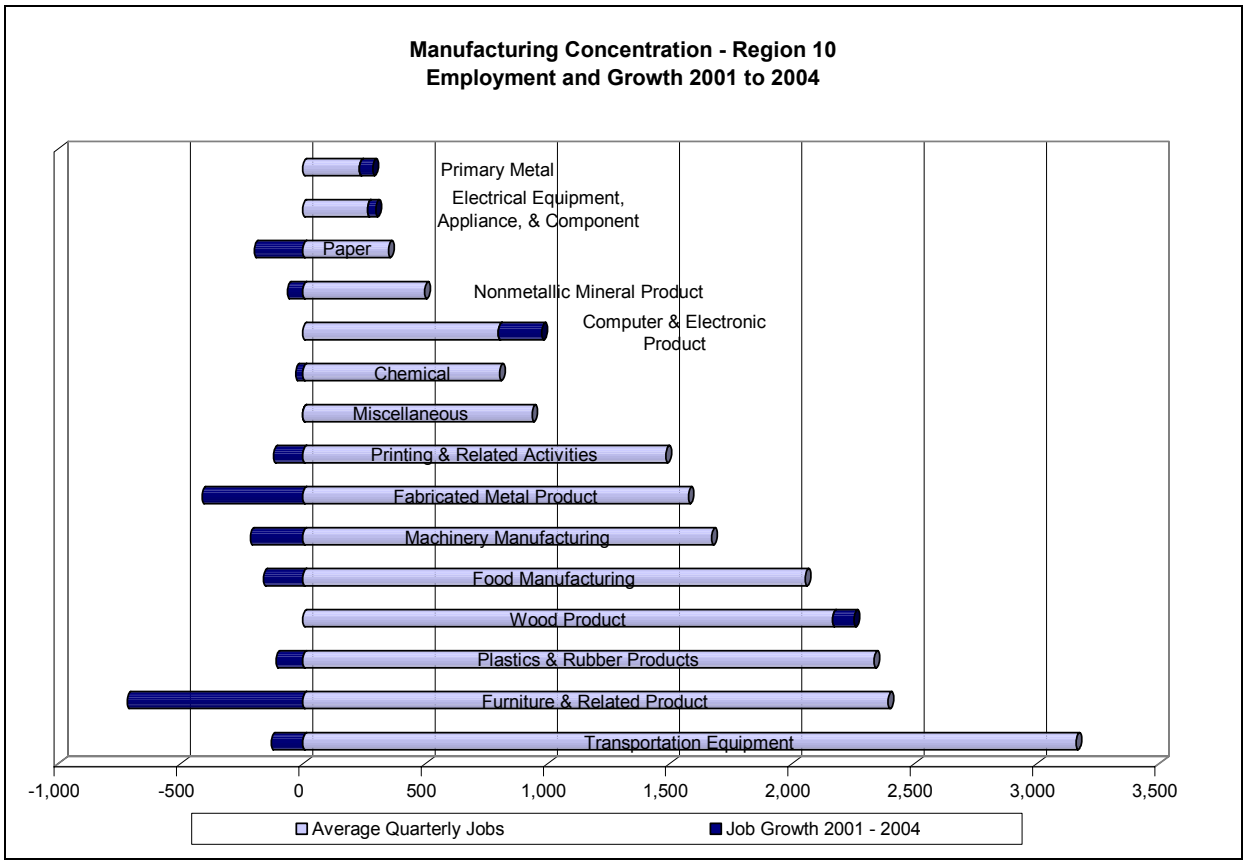
Source: Indiana Department of Workforce Development, U.S. Bureau of Labor Statistics, Covered Employment and Wages (CEW).

It also comes as no surprise that, as with the rest of Indiana, the largest loss of jobs has been concentrated in the manufacturing sector. Even with this large loss of jobs the manufacturing industry maintains a very significant role in employment for Region 10.

- The top five major industry classifications (2-digit NAICS) are: (1) manufacturing – 21.2%, (2) retail trade – 13.1%, (3) health care and social services – 11.7%, (4) accommodation & food services – 8.5%, and (5) educational services – 7.7%.
- These five industries are responsible for 62.2% of Region 10's employment.
- The largest employment growth occurred in the healthcare industry from 2001 to 2004 (988 jobs).

The size of the manufacturing industry justifies a closer look at the various sub-industries within manufacturing. Although there have been fairly large losses of jobs in manufacturing, some manufacturing areas have experienced gains. Figure 2 below shows manufacturing employment for 2004 and the change in the number of jobs since 2001.

Figure 2: Manufacturing employment and job growth.

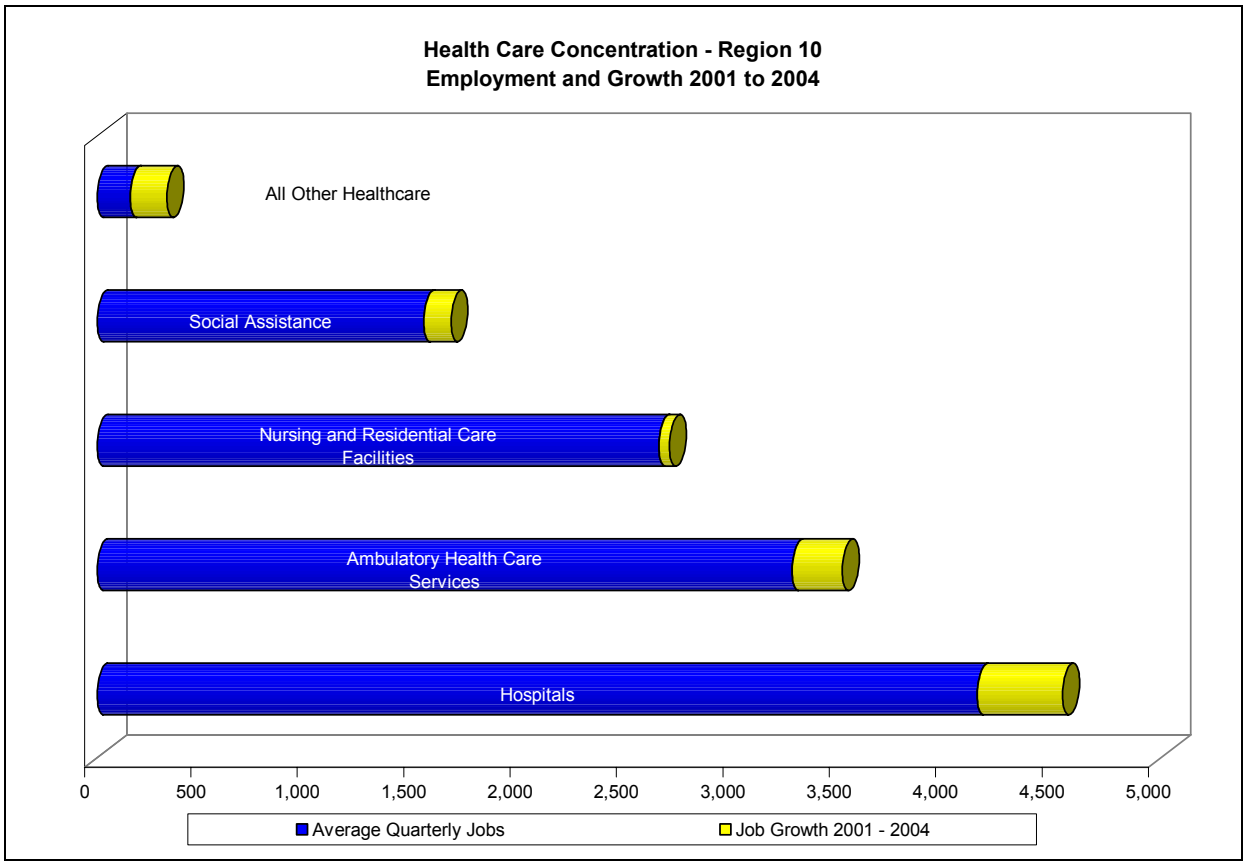


Source: Indiana Department of Workforce Development, U.S. Bureau of Labor Statistics, Covered Employment and Wages (CEW).

The largest job loss occurred in Furniture & Related Products Manufacturing (718 jobs) followed by Fabricated Metal Products manufacturing (412 jobs). Gains in employment occurred in: (1) Wood Products Manufacturing (88) jobs; (2) Computer & Electronic Products Manufacturing (178) jobs; (3) Electrical Equipment, Appliance, & Component Manufacturing (34 jobs); and (4) Primary Metals Manufacturing (55 jobs).

As was mentioned earlier, the largest area of job growth from 2001 to 2004 occurred in the Healthcare Industry for Region 10. Figure 3 below breaks down jobs and job growth within the healthcare industry.

Figure 3: Healthcare employment and job growth



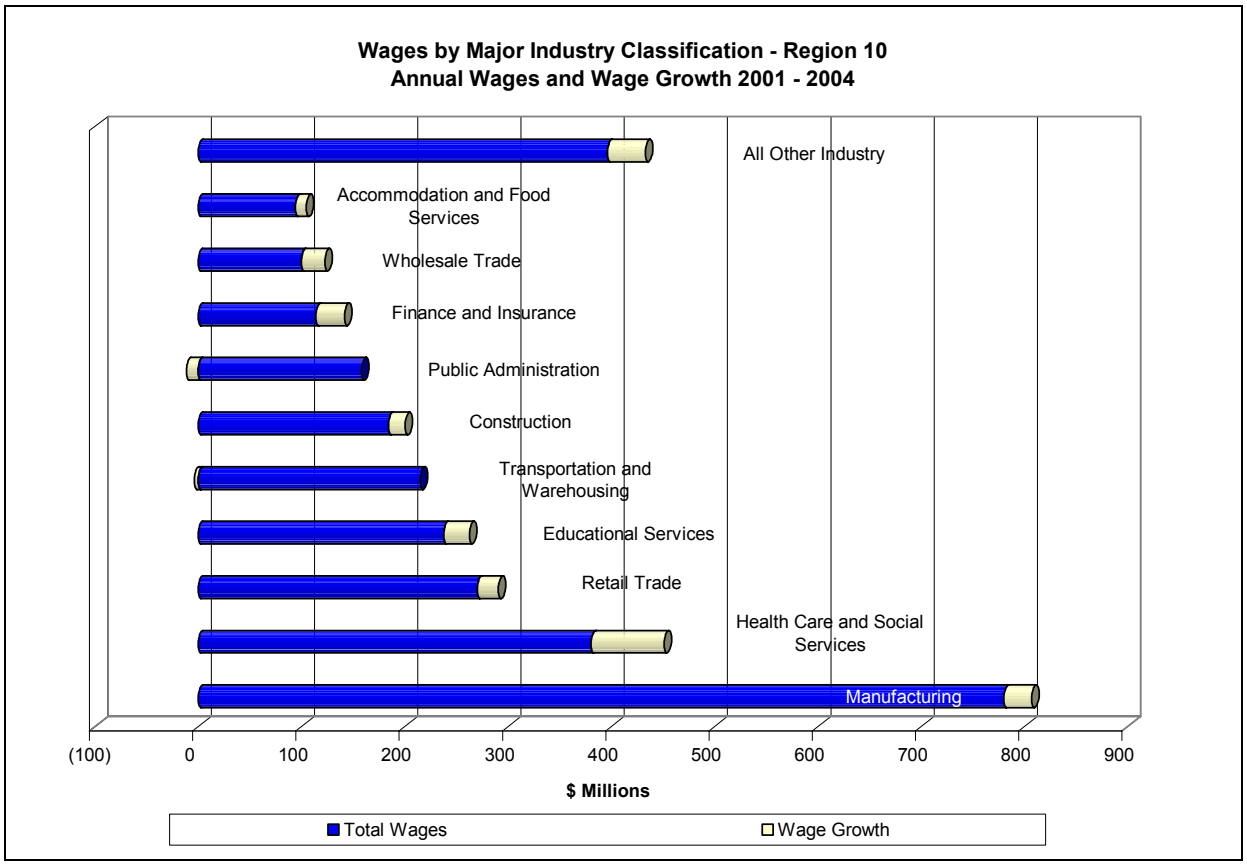
Source: Indiana Department of Workforce Development, U.S. Bureau of Labor Statistics, Covered Employment and Wages (CEW).

All of the healthcare sub-industries experienced growth over the 2001 – 2004 time frame. The largest employers within the healthcare field for Region 10 are Hospitals and Ambulatory Health Care services and those two areas also experienced the largest growth in employment.

Industry Wages and Wage Growth

Figure 4 below shows total wages paid by industry for Region 10 (for the largest 10 industries as measured by total wages). As would be expected, industries with a large

Figure 4: Wages and wage growth by industry.



*Source: Indiana Department of Workforce Development**, U.S. Bureau of Labor Statistics, Covered Employment and Wages (CEW).***

employee base have a large presence in terms of wages although the rankings are somewhat different (for example, accommodation and food services dropped out of the top five due to generally low average wages). Even though manufacturing experienced a fairly significant reduction in workforce over the period 2001 through 2004, total manufacturing wages actually increased.

- The top five major industry classifications in terms of total wages paid (2-digit NAICS) are: (1) manufacturing, (2) healthcare and social services, (3) retail trade, (4) educational services, and (5) transportation & warehousing.
- These five industries are responsible for 64.3% of Region 10's wages with manufacturing the largest contributor (26.6%).
- The largest growth in wages occurred in the healthcare industry (70.6 million).

High paying jobs can enhance living standards and help balance local and state budgets through the resulting higher tax revenues. Table 1 shows the fifteen highest paying industries in Region 10.

Table 1: Highest paying industries in Region 10

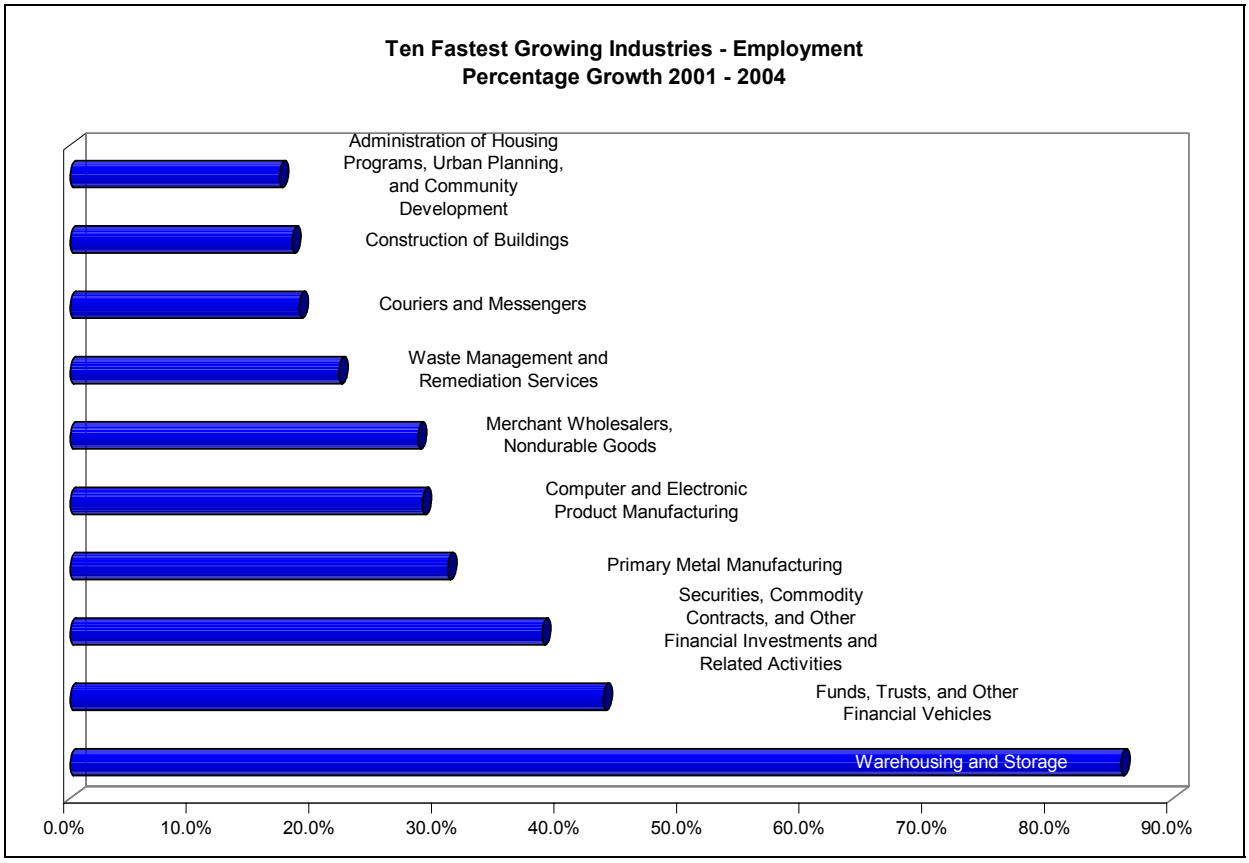
Industry (3-Digit NAICS) Average Annual Salary Sorted by 2004 Wage				
NAICS	Industry	Avg. Annual Wage 2004	Avg. Annual Wage 2001	% Change
525	Funds, Trusts, and Other Financial Vehicles	$ 109,809	$ 72,378	51.7%
523	Securities, Commodity Contracts, and Other Financial Investments and Related Activities	$ 71,765	$ 85,458	-16.0%
325	Chemical Manufacturing	$ 60,604	$ 53,041	14.3%
221	Utilities	$ 50,575	$ 46,580	8.6%
334	Computer and Electronic Product Manufacturing	$ 50,106	$ 50,445	-0.7%
928	National Security and International Affairs	$ 49,294	$ 38,818	27.0%
517	Telecommunications	$ 48,856	$ 41,532	17.6%
551	Management of Companies and Enterprises	$ 47,983	N/A	N/A
925	Administration of Housing Programs, Urban Planning, and Community Development	$ 47,429	$ 31,140	52.3%
621	Ambulatory Health Care Services	$ 44,174	$ 38,678	14.2%
237	Heavy and Civil Engineering Construction	$ 44,009	$ 41,053	7.2%
331	Primary Metal Manufacturing	$ 42,653	$ 36,876	15.7%
327	Nonmetallic Mineral Product Manufacturing	$ 41,740	$ 34,237	21.9%
491	Postal Service	$ 41,604	$ 36,716	13.3%
424	Merchant Wholesalers, Nondurable Goods	$ 40,782	$ 30,018	35.9%

*Source: Indiana Department of Workforce Development**, U.S. Bureau of Labor Statistics, Covered Employment and Wages (CEW).***

Industries Experiencing Rapid Growth in Jobs, Establishments & Wages

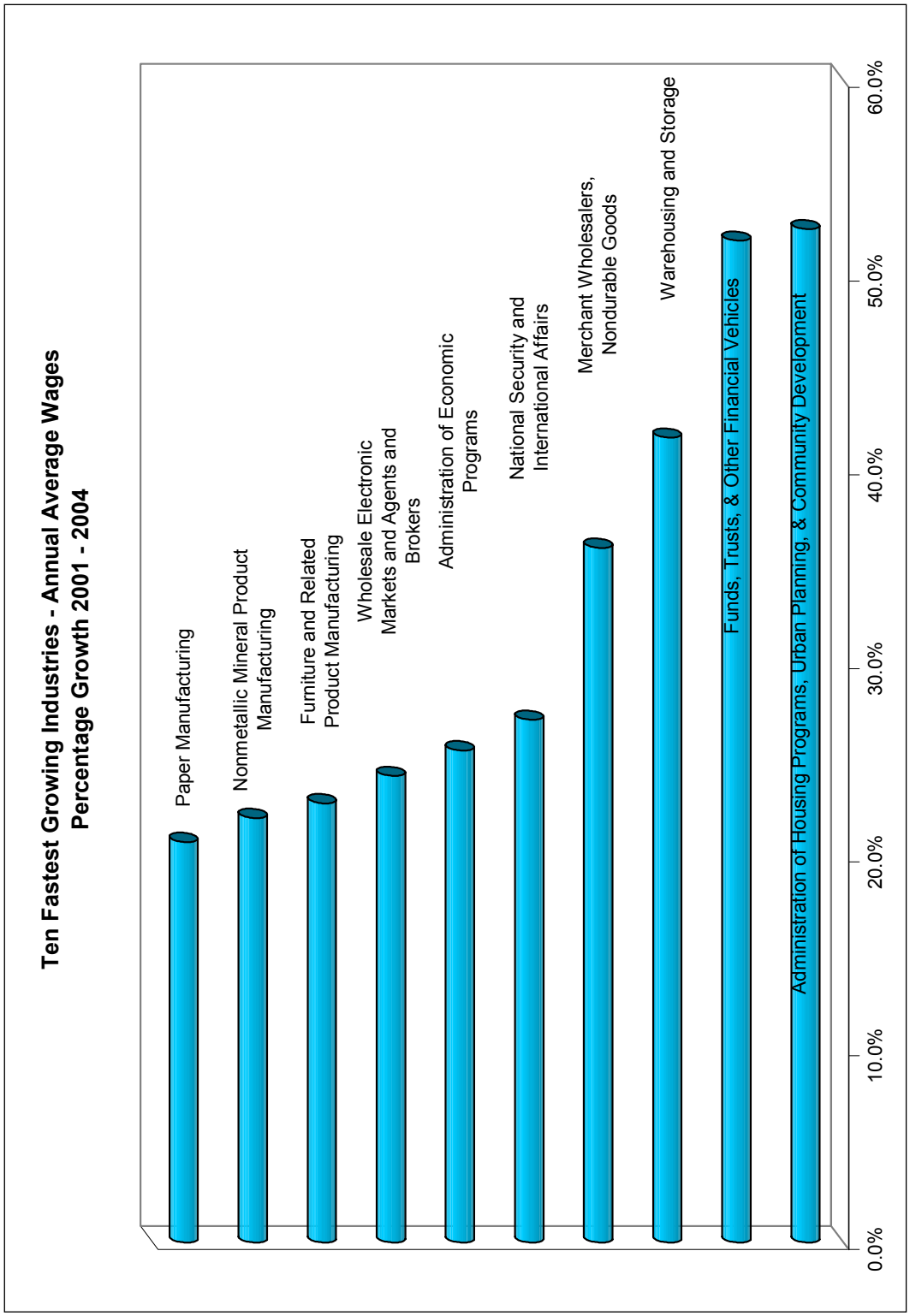
Much of the above analysis does a good job in helping to identify the industries that currently play a significant role in the economy. The following graphs show the ten fastest growing industries in Region 10 in terms of employment, establishments (number of businesses in that sector), and wages.

Figure 5: Fastest employment growth by industry



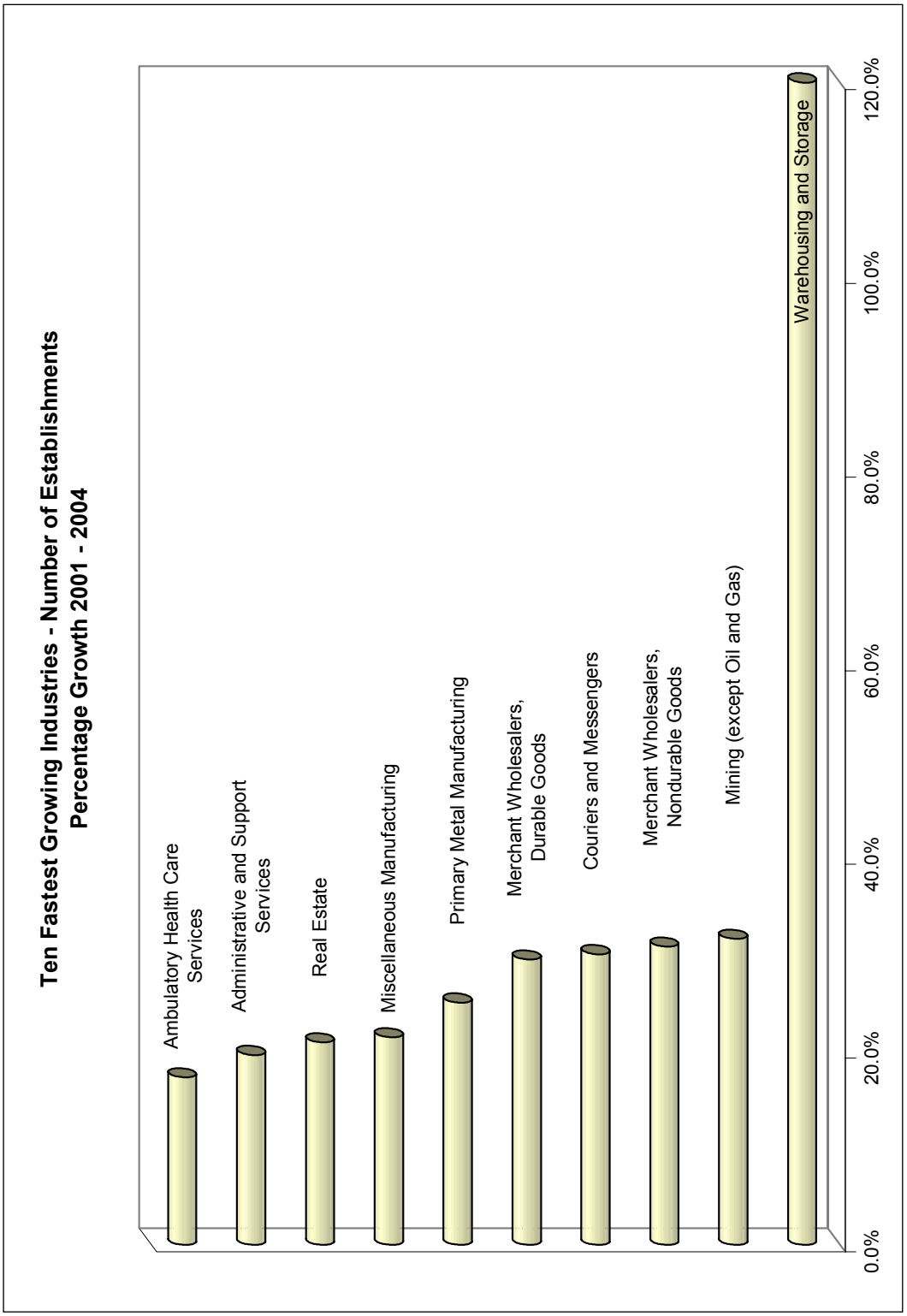
*Source: Indiana Department of Workforce Development**, U.S. Bureau of Labor Statistics, Covered Employment and Wages (CEW).***

Figure 6: Fastest wage growth by industry



Source: Indiana Department of Workforce Development, U.S. Bureau of Labor Statistics, Covered Employment and Wages (CEW).

Figure 7: Fastest establishment growth by industry



*Source: Indiana Department of Workforce Development**, U.S. Bureau of Labor Statistics, Covered Employment and Wages (CEW).***

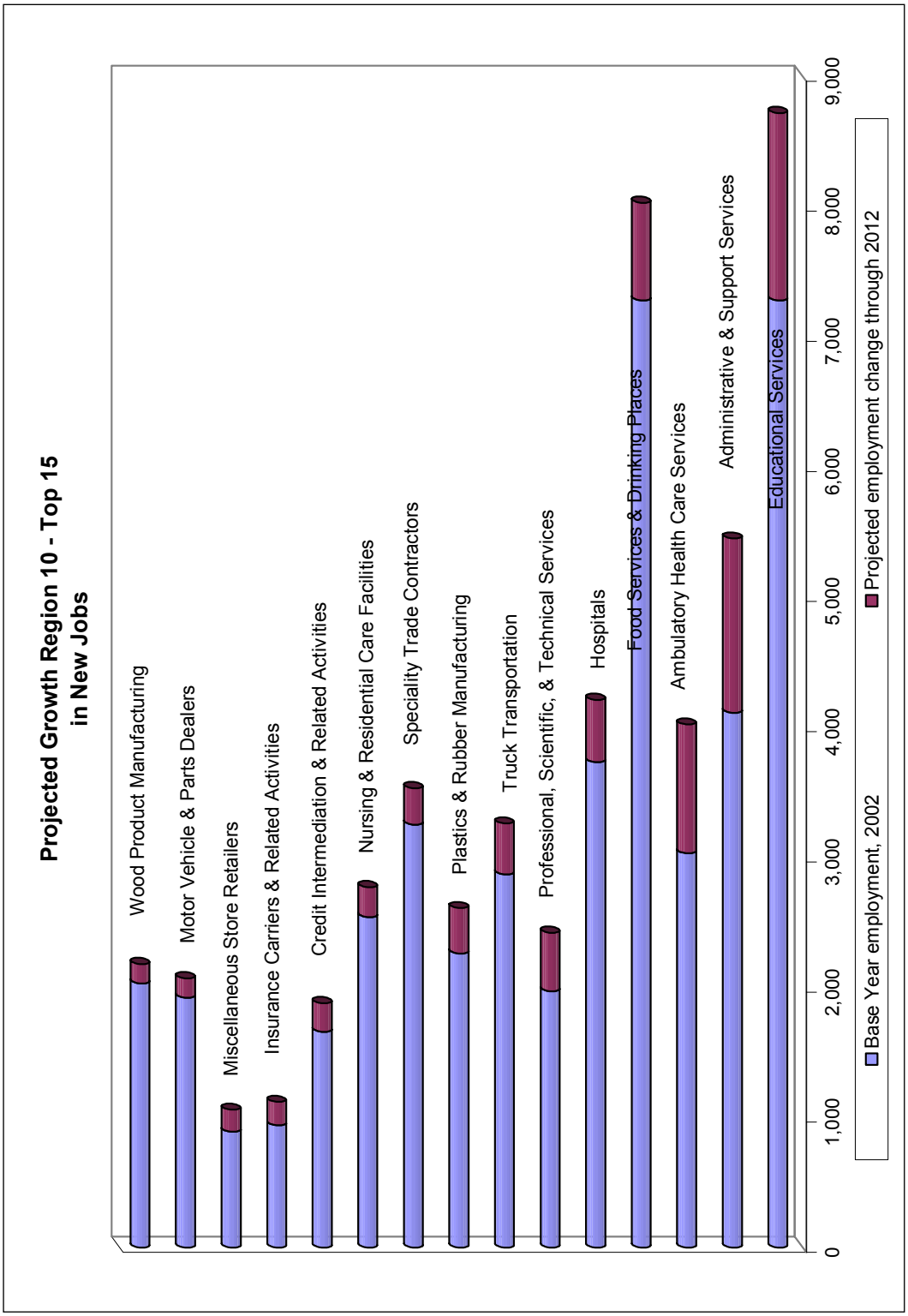
Industries Poised for Employment Growth

The Indiana Department of Workforce Development provided data on projected employment for the various EGRs that was completed in 2002 and occupations and employment by industry are projected out to the year 2012.

Figures 8 and 9 on the following page show projected growth based on number of new jobs and speed of growth (percentage expected growth) respectively.

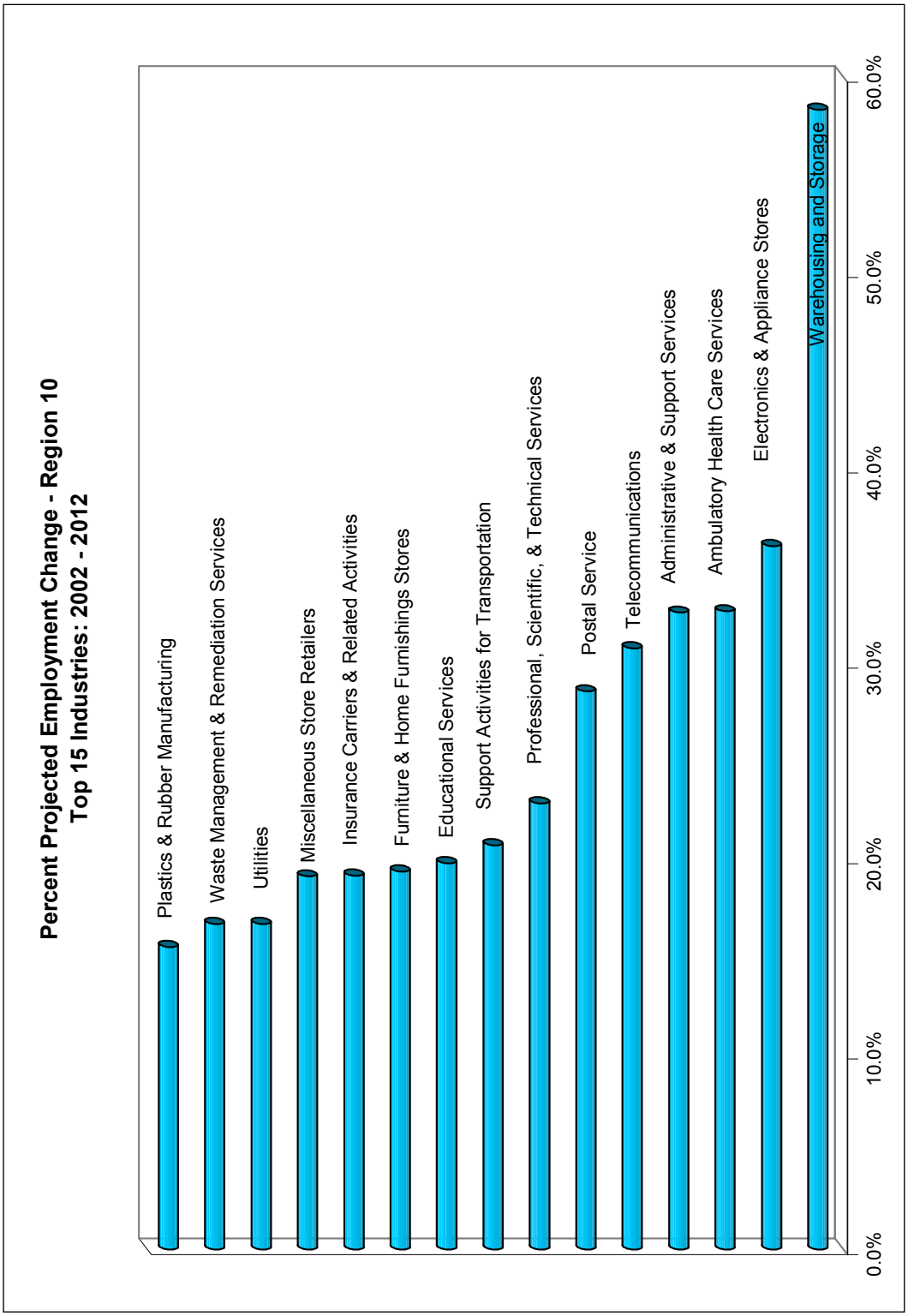
Significant growth is anticipated through 2012 in the areas of Health Care, Logistics, and certain sub-categories within Manufacturing.

Figure 8: Projected growth in jobs – Top 15



*Source: Indiana Department of Workforce Development**, U.S. Bureau of Labor Statistics, Covered Employment and Wages (CEW).***

Figure 9: Projected growth in employment – fastest growth



Source: Indiana Department of Workforce Development, ***U.S. Bureau of Labor Statistics, Covered Employment and Wages (CEW).***

Industries With or Developing a Competitive Advantage

A region possesses a competitive (or comparative) advantage if it is able to continuously attract new business and supports the growth of existing business. The result of this activity will be higher levels of output and personal income for the region's population. The specific set of resources and capabilities that allows a region (or state or metro-area) to establish and/or maintain competitive advantage include infrastructure, governmental policies, technology, the competitive strength of the firms and industries within the region, and the region's workforce to name a few. A skilled labor pool in a region with a commitment to education and training are appealing factors to business.

There are two basic ways to try to get at a measurement of a region's competitive advantage. One is input based. An attempt is made to quantify the attributes mentioned above that make an economy competitive and combine those measures to come up with some sort of "score" or index that can be compared to other regions. A number of studies have done this sort of analysis but primarily at the state level or metro-area. One such study is the *Beacon Hill Institute's (BHI) Metro Area and State Competitiveness Report, 2004*. The BHI study develops an index for all 50 states and for 50 U.S. metro areas. Indiana ranked 42 (out of 50) for 2004, a drop of 12 places since 2003. The sub-index ranking for human resources (workforce) was 27th with low scores for percent of students enrolled in degree-granting institutions, infant mortality rate, and non-federal physicians per 100,000 inhabitants.

Indiana received good marks for the unemployment rate, percent of adults in the labor force, and percentage of students at or above proficient in mathematics. This is rather interesting as we will see later that employers list math skills as one of the top weaknesses of

current workers in Region 10. These types of discrepancies reveal the difficulty of trying to measure competitiveness in this manner.

The Louisville Metro area was ranked 37th out of 50 metro areas and the ranking for human resources was 25th. Low scores in the percent of students enrolled in degree-granting institutions, population graduating from high school, and non-federal physicians per 100,000 inhabitants contributed to the relatively low ranking.

A second way to identify competitive advantage is based on finding some of the by-products that would be expected in the presence of competitive advantage. Two tools employed for detecting this type of indirect evidence are location quotients and shift-share analysis.

Location Quotient

A location quotient compares the industry concentration of a region to some base such as the national or state industry concentrations. A location quotient (LQ) is basically the ratio of a ratio[2]. You can compute an LQ to compare to the nation, state, or some other region. LQs greater than 1.2 or less than 0.80 would be considered significant. LQs greater than 2 would indicate a particularly strong industry representation while those less than 0.50 would indicate a particularly weak industry representation.

Table 2 below shows the top 20 LQs for industries in Region 10 using a U.S. base. In addition, the changes in LQs for the period 2001 through 2004 are also given. Despite declines in manufacturing, Region 10 has very high LQs for a number of manufacturing industries with wood products being the highest at 5.12. The LQ for this industry is high also when compared to the state of Indiana with a ratio of 3.11. The positive change in the LQ over time of 0.48 implies growing competitive strength in that industry.

[2] For example, if 5% of a region's workforce is employed in a sector and that ratio is 3% for the nation as a whole, the LQ using the nation as a base would be 5%/3% = 1.67.

Table 2: Location Quotient - Region 10 Top 20

LOCATION QUOTIENT - REGION 10 RANKED BY US BASE - TOP 20 INDUSTRIES						
Industry	**Jobs 2004**	**Jobs LQ (IN base)**	**Jobs LQ (Midwest base)**	**Jobs LQ (US base)**	**Jobs 2001 LQ (US base)**	**Change in LQ**
Wood Product Manufacturing	2187	3.11	6.29	5.12	4.64	0.48
Furniture and Related Product Manufacturing	2183	2.31	4.93	5.02	6.1	-1.08
Plastics and Rubber Products Manufacturing	2331	1.52	2.79	3.77	3.57	0.2
Administration of Economic Programs	1518	3.92	3.82	3.39	5.21	-1.82
Mining (except Oil and Gas)	487	2.27	3	3.06	N/A	N/A
Truck Transportation	3172	1.82	3.06	3	2.79	0.21
Printing and Related Support Activities	1439	2.09	2.25	2.84	2.7	0.14
Transportation Equipment Manufacturing	3225	0.66	1.45	2.32	2.22	0.1
Machinery Manufacturing	1716	1.11	1.26	1.95	1.7	0.25
Miscellaneous Manufacturing	925	0.9	1.66	1.83	1.69	0.14
Food Manufacturing	2113	1.86	1.93	1.83	1.85	-0.02
Gasoline Stations	1068	1.23	1.83	1.6	1.44	0.16
General Merchandise Stores	3660	1.32	1.6	1.54	1.51	0.03
Other Information Services	208	0.87	1.05	1.48	1.46	0.02
Fabricated Metal Product Manufacturing	1576	0.75	1	1.36	1.6	-0.24
Motor Vehicle and Parts Dealers	1980	1.33	1.58	1.36	1.38	-0.02
Nonmetallic Mineral Product Manufacturing	503	0.92	1.45	1.3	1.28	0.02
Chemical Manufacturing	814	0.71	1.07	1.21	1.13	0.08
Heavy and Civil Engineering Construction	1021	1.71	2.01	1.19	1	0.19
Food and Beverage Stores	2621	1.46	1.24	1.19	1.23	-0.04
N/A = This item is not available. This is due to non-disclosure requirements, or because a calculation could not be created. *Data sources: Indiana Business Research Center based on ES202 data, U.S. Bureau of Labor Statistics*						

Shift-Share Analysis

Another method that can be used to detect a competitive advantage is shift-share analysis. A shift-share analysis allows you to compare local industry patterns to those occurring nationally. A shift-share will furnish a picture of the national, industrial, and regional contributions in a particular industry. We are particularly interested in the industry mix component and the regional (competitive) component of the shift-share analysis. The industry mix component will allow us to quickly observe industries that are growing faster (and slower)

than average while the regional component will allow us to examine the local impact of an industry.

A positive regional shift component indicates that a local economy or region gained more jobs (or lost fewer) in an industry than would be expected based on national and industry factors. Conversely, a negative regional shift component means the local economy lost more (or gained fewer) jobs than would be expected based on national and industry factors.

Close examination of the industry mix and regional shift will allow us to determine which industries in Region 10 are in growing industries and are doing well (stars) or are lagging the industry (potential stars). We can also identify industries that are experiencing unfavorable growth nationally and how our local industries compare. The figure below shows the possible classification based on these two components of the shift-share analysis.

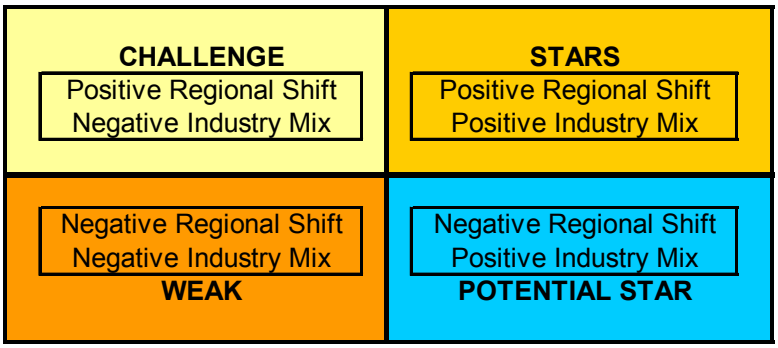


Table 3 below contains the major industry (2-digit NAICS) shift-share analysis for Region 10. Despite fairly large losses in manufacturing, Region 10 has still faired well when compared to the nation. In the area of health care Region 10 seems to be lagging behind as indicated by the negative regional shift number of 60. This indicates relatively slow local growth in an industry that is quickly growing nationally and is therefore a potential star.

Table 3: Major industry (2-digit NAICS) shift-share analysis

REGION 10 SHIFT-SHARE ANALYSIS JOBS 2001 - 2004					
Industry	**Employment 2004**	**Actual Change in Employment**	**National Growth**	**Industry Mix**	**Regional Shift**
Administrative and Support and Waste Management and Remediation Services	4370	1118	61	130	927
Manufacturing	21103	-2960	453	-4122	709
Finance and Insurance	3007	581	46	65	471
Construction	5729	959	90	435	434
Wholesale Trade	2773	271	47	-79	303
Educational Services	8186	814	139	397	278
Mining	505	83	8	4	71
Transportation and Warehousing	6128	-73	117	-254	64
Utilities	579	22	10	-24	36
Management of Companies and Enterprises	288	-8	6	-11	-3
Real Estate and Rental and Leasing	1004	41	18	30	-7
Information	873	-171	20	-179	-11
Other Services(Except Public Administration)	2624	4	49	5	-50
Health Care and Social Services	11873	1061	203	918	-60
Professional, Scientific, and Technical Services	1916	-121	38	-64	-95
Retail Trade	13470	297	248	178	-129
Arts, Entertainment, and Recreation	2880	95	52	270	-227
Accommodation and Food Services	8481	536	150	622	-236
Public Administration	4851	-1638	122	288	-2048
Total	*100917*	*985*	*1877*	*-1391*	*425*
Data sources: Indiana Business Research Center based on ES202 data, U.S. Bureau of Labor Statistics					

The manufacturing, healthcare, and transportation & warehousing (logistics) industries are analyzed in Tables 4 and 5 below. Manufacturing has taken a hit nationwide and this is evidenced in the negative industry mix number for all manufacturing sub-sectors. However, the competitive component for Region 10 is positive for the wood products, printing, plastics & rubber products, computer & electronic product, miscellaneous, and transportation equipment manufacturing sub-sectors.

For healthcare, each of the three sub-sectors can be listed as either a star or a potential star. All sub-sectors had a positive industry mix component and the regional component was

Table 4: Region 10 manufacturing shift-share

REGION 10 SHIFT-SHARE ANALYSIS MANUFACTURING JOBS 2001 - 2004					
Industry	**Jobs 2004**	**Actual Change in Jobs**	**National Growth**	**Industry Mix**	**Regional Shift**
Food Manufacturing	2113	-101	42	-83	-59
Wood Product Manufacturing	2187	20	41	-106	85
Paper Manufacturing	347	-197	10	-102	-105
Printing and Related Support Activities	1439	-220	31	-312	60
Chemical Manufacturing	814	-41	16	-98	41
Plastics and Rubber Products Manufacturing	2331	-123	46	-355	186
Nonmetallic Mineral Product	503	-74	11	-49	-36
Primary Metal Manufacturing	227	20	4	-49	65
Fabricated Metal Product	1576	-466	38	-319	-185
Machinery Manufacturing	1716	-472	41	-474	-39
Computer and Electronic Product Manufacturing	833	124	13	-220	331
Electrical Equipment, Appliance, and Component Manufacturing	269	-7	5	-71	59
Transportation Equipment	3225	-75	62	-371	234
Furniture and Related Product Manufacturing	2183	-1186	63	-568	-682
Miscellaneous Manufacturing	925	14	17	-103	100
Manufacturing - All	*21103*	*-2960*	*453*	*-4122*	*709*
Data sources: Indiana Business Research Center based on ES202 data, U.S. Bureau of Labor Statistics					

Table 5: Region 10 healthcare & logistics shift-share

REGION 10 SHIFT-SHARE ANALYSIS HEALTHCARE & LOGISTICS JOBS 2001 - 2004					
Industry	**Employment 2004**	**Actual Change in Employment**	**National Growth**	**Industry Mix**	**Regional Shift**
Healthcare					
Ambulatory Health Care Services	3289	137	59	418	-340
Hospitals	4137	407	70	154	183
Nursing and Residential Care Facilities	2626	83	48	143	-108
All Health Care and Social Services	*11873*	*1061*	*203*	*918*	*-60*
Logistics					
Truck Transportation	3172	284	54	-44	274
Support Activities for Transportation	250	-32	5	-3	-35
Postal Service	517	3	10	-62	56
Couriers and Messengers	317	82	4	-9	86
Warehousing and Storage	229	117	2	11	104
All Transportation and Warehousing (Logistics)	*6128*	*-73*	*117*	*-254*	*64*
Data sources: Indiana Business Research Center based on ES202 data, U.S. Bureau of Labor Statistics					

positive for hospitals also placing that sub-sector into the star category. The ambulatory and nursing/residential care sub-categories had negative regional shifts placing them in the potential star category.

Industries Previously Targeted for Economic Development

A summary of previously targeted industries was presented by Thayr Richey of the Strategic Development Group at the Region 10 Core meeting on September 13, 2005. Those proposals are outlined below.

From the *Indiana Economic Development Council's A New Path to Progress: Statewide Plan for Economic Development (January 2005)*

- Advanced Materials
- ***Advanced Logistics***
- Earth Products
- Biomed/Biotech
- ***Advanced Manufacturing***
- Chemicals
- Educational Services
- Agribusiness
- Food Processing
- Technology
- Arts, Entertainment, and Recreation
- Visitor/Tourism

From the former *Indiana Department of Commerce's Energize Indiana Strategy (2003)*

- ***Advanced Manufacturing***
  - Automotive and electronics
  - Aerospace technology
  - Robotics
  - Engineering design technology
- ***Life Sciences***
- Information Technology
- ***21st Century Logistics***
  - High-tech distribution

- Efficient, effective flow and storage of goods, services and information
- Intermodal ports

In addition to the previously mentioned studies, *The Indiana Health Industries Workforce Study,* (2002) conducted by the Hudson Institute examined the impact of the healthcare industry on Indiana's economy and analyzed the workforce development needs of that industry. Some of findings from that study include:

- Indiana's $11 billion (at the time) healthcare industry is a promising engine for growth, capable of offsetting some of the losses in traditional manufacturing.
- Many health industries are projected to grow faster than the average
- This industry will demand substantial numbers of employees in clinical and technical occupations and many of these occupations require a fairly high level of technical skills.

Industries that have a presence or potential in Region 10 and that have been targeted by state and/or local economic development experts for future growth include Advanced Manufacturing, Advanced Logistics, and Healthcare. The sub-sectors for these industries are listed in Table 6 on the following page.

Table 6: Region 10 concentrations in industries targeted for future growth

REGION 10 CONCENTRATIONS FOR INDUSTRIES TARGETED FOR FUTURE GROWTH IN PRIOR STUDIES				
NAICS	**Industry Title**	**Establish-ments**	**Jobs**	**Annual Wages**
	ADVANCED LOGISTICS	258	5351	$ 193,708,014
4841	General freight trucking	132	2485	$ 88,051,270
4842	Specialized freight trucking	52	559	$ 16,254,470
4881	Support activities for air transportation	3	84	$ 1,862,965
4884	Support activities for road transportation	7	63	$ 1,485,048
4885	Freight transportation arrangement	13	57	$ 2,220,691
4931	Warehousing and storage	11	223	$ 5,414,969
	ADVANCED MANUFACTURING	147	7707	$ 293,551,949
331	***Primary metal manufacturing***	6	236	$ 10,066,052
332	***Fabricated metal product manufacturing***	64	1574	$ 56,801,638
3323	Architectural and structural metals mfg.	12	533	$ 15,951,585
3327	Machine shops and threaded product mfg.	33	429	$ 15,408,176
3328	Coating, engraving, and heat treating metals	6	152	$ 8,311,512
3329	Other fabricated metal product manufacturing	10	336	$ 13,075,268
333	***Machinery manufacturing***	40	1671	$ 61,735,952
3331	Ag., construction, and mining machinery mfg.	4	507	$ 16,615,528
3332	Industrial machinery manufacturing	6	100	$ 3,038,165
3335	Metalworking machinery manufacturing	11	77	$ 2,952,051
3339	Other general purpose machinery manufacturing	14	592	$ 25,306,966
334	***Computer and electronic product manufacturing***	9	799	$ 40,034,751
3344	Semiconductor and electronic component mfg.	6	712	$ 37,036,898
335	***Electrical equipment and appliance mfg.***	9	265	$ 6,421,812
3359	Other electrical equipment and component mfg.	3	145	$ 2,709,794
336	***Transportation equipment manufacturing***	19	3162	$ 118,491,744
3363	Motor vehicle parts manufacturing	8	2225	$ 81,687,534
	ADVANCED MATERIALS	23	1631	$ 89,980,086
325	***Chemical manufacturing***	14	804	$ 48,725,324
3251	Basic chemical manufacturing	4	137	$ 6,567,792
3255	Paint, coating, and adhesive manufacturing	4	23	$ 666,394
33441	Semiconductor and electronic component mfg.	6	712	$ 37,036,898
	BIOMEDICAL/BIOTECHNICAL (LIFE SCIENCES)	546	11058	$ 373,756,160
4461	Health and personal care stores	63	830	$ 22,017,055
621	***Ambulatory health care services***	387	3287	$ 145,200,005
6211	Offices of physicians	175	1544	$ 88,987,298
6212	Offices of dentists	85	503	$ 16,485,462
6213	Offices of other health practitioners	85	604	$ 20,730,903
6214	Outpatient care centers	21	381	$ 12,604,817
6215	Medical and diagnostic laboratories	7	27	$ 909,764
6216	Home health care services	11	224	$ 5,389,540
6219	Other ambulatory health care services	3	4	$ 92,221
622	***Hospitals***	7	4136	$ 134,682,615
623	***Nursing and residential care facilities***	68	2644	$ 64,947,430
6231	Nursing care facilities	18	1428	$ 38,707,624
6232	Residential mental health facilities	24	339	$ 8,802,156
6233	Community care facilities for the elderly	13	781	$ 15,690,738
6239	Other residential care facilities	13	96	$ 1,746,912

Source: Indiana Department of Workforce Development, U.S. Bureau of Labor Statistics, Covered Employment and Wages (CEW).

Integral Industries for EGR 10's Success

Over the previous pages we have provided evidence pertaining to the following issues:

- Industries which currently have a major impact on Region 10's economy due to number of workers employed and total wages paid.
- Industries within Region 10 that pay the highest wages.
- Industries in Region 10 which have been experiencing rapid growth in jobs, establishments, and wages.
- Industries in Region 10 with high anticipated future growth.
- Industries in which Region 10 has and is building competitive advantage.
- Industries positioned to capitalize on growth trends, and
- Industries targeted by state and/or local economic development experts for future growth.

The evidence clearly points to three major industry classifications as being key industries for Region 10. These are Healthcare, Manufacturing, and Logistics.

Healthcare

- The health industry accounts for over "one in ten jobs and payroll dollars in the metro area".
- The sector employs 11,873 people in the region.
- The Louisville region now serves a large hyper-regional catchment area that extends far beyond the MSA for medical services.

Manufacturing

- Manufacturing remains an important sector for the six county area and accounts for 21,103 jobs.
- Despite the decline of manufacturing employment in Indiana, advanced manufacturing is likely to remain a substantial player in the local economy.

Logistics

- Logistics has enormous potential and has been growing as an "emerging" sector for the area.
- The presence of three interstates, a major airport, and important Ohio River ports position logistics as a strong contender in the near future.
- However, rising energy costs will continue to be a factor.

Some areas within these major industry classifications seem to hold more promise than others, either due to increased growth prospects, wages, or some combination of the two. The key industries for Region 10 along with their NAICS code, number of establishments, jobs, and annual wages are provided in Table 7 below.

Table 7: Region 10 key industries

REGION 10 "KEY" INDUSTRIES				
NAICS	**Industry Title**	**Establish-ments**	**Jobs**	**Annual Wages**
321	*Wood Products Manufacturing*	74	2167	$ 65,543,573
325	*Chemical manufacturing*	14	804	$ 48,725,324
331	*Primary metal manufacturing*	6	236	$ 10,066,052
332	*Fabricated metal product manufacturing*	64	1574	$ 56,801,638
333	*Machinery manufacturing*	40	1671	$ 61,735,952
334	*Computer and electronic product manufacturing*	9	799	$ 40,034,751
335	*Electrical equipment and appliance mfg.*	9	265	$ 6,421,812
336	*Transportation equipment manufacturing*	19	3162	$ 118,491,744
484	*Truck Transportation*	184	3044	$ 104,305,740
488	*Support Activities for Transportation*	29	247	$ 7,494,662
621	*Ambulatory health care services*	387	3287	$ 145,200,005
622	*Hospitals*	7	4136	$ 134,682,615
623	*Nursing and residential care facilities*	68	2644	$ 64,947,430

Source: Indiana Department of Workforce Development, U.S. Bureau of Labor Statistics, Covered Employment and Wages (CEW).

Section III: Selection and Definition of Critical Occupations and Skill Sets

This section outlines Region 10's efforts to identify critical occupations and skill sets. A holistic approach was used, considering both primary and secondary data sources in order to determine criticality. In particular the following tools/methodologies were employed:

- LMI data (Region 10 Projections from the SSI Toolkit)
- Kentuckiana Outlook
- ERISS Job Vacancy Survey
- Online survey of Region 10's healthcare, manufacturing & logistics industries
- Healthcare and manufacturing industry forum for Region 10 employers
- Various other consortium input

The process began by determining which occupations in the previously identified key industries represented strong current demand which were expected to experience the most growth over the 2002 – 2012 time period. Occupations that met these criteria and that were expected to provide good pay and/or benefits were selected and presented to various members of the Region 10 consortia for a particular industry. This was done via an industry forum and an online survey.

The supplemental questions from the ERISS survey were examined for Region 10 to determine responses to questions relating to skills gaps in the existing workforce and in new hires for the manufacturing, healthcare, and logistics industries. This data was also used to assist in the development of our own survey and in our industry forum.

At this time additional input was considered regarding any occupations that may not have been identified to day. The online survey and industry forum were also used to verify

(1) criticality, (2) expected short-run and long-run shortages, and (3) cross cutting skills and weaknesses in the existing workforce and in new hires.

Over the following pages the path taken to identify the critical occupations and skill sets for Healthcare and Manufacturing/Logistics will be presented. The last portion (but not the smallest) of this section of the report provides specific information for each of the identified occupations including:

- Skills and credentials required for entry,
- Career pathways to the occupations where available,
- Typical wages and earnings (i.e., entry and median) and non-wage benefits, and
- Descriptions of critical skill sets that cut across multiple occupations.

Key Industry Occupational Demand and Expected Growth

Table 8 through Table 10 on the following pages outline the occupations which are anticipated to experience the largest growth through 2012. Included in these tables are median wages, average non-wage benefits, and growth measure both in terms of number of jobs and percentage growth.

Table 8: Region 10 – Top 25 Anticipated Growth Occupations in Healthcare

TOP 25 ANTICIPATED GROWTH OCCUPATIONS IN HEALTHCARE, 2002 - 2012							
	Occupation	Median Salary	Average Annual Benefits	# of Jobs 2002	# of Jobs 2012	Projected Job Growth	% Growth 2002-2012
1	Registered Nurses	$47,680	$15,128	2,092	2,657	565	27%
2	Licensed Practical and Licensed Vocational Nurses	$32,090	$10,131	667	790	123	18%
3	Physicians and surgeons	$122,460	$50,171	445	565	120	26%
4	Medical Records and Health Information Technicians	$23,010	$8,038	128	189	61	47%
5	Physical Therapists	$54,860	$19,282	132	182	50	37%
6	Dental Hygienists	$52,310	$16,241	114	163	49	42%
7	Healthcare Practitioners and Technical Workers, All Other	$30,582	$9,953	158	200	42	26%
8	Pharmacy Technicians	$21,030	$6,857	174	208	34	19%
9	Radiologic Technologists and Technicians	$37,200	$11,479	155	188	33	21%
10	Pharmacists	$84,120	$25,138	172	203	31	18%
11	Respiratory Therapists	$38,090	$11,895	87	118	31	35%
12	Occupational Therapists	$50,550	$16,210	72	101	29	40%
13	Physician Assistants	$78,750	$22,441	55	83	28	50%
14	Emergency Medical Technicians and Paramedics	$22,730	$7,294	109	133	24	22%
15	Health Diagnosing and Treating Practitioners, All Other	$45,690	$14,578	79	102	23	29%
16	Medical and Clinical Laboratory Technologists	$41,330	$12,691	118	138	20	16%
17	Surgical Technologists	$32,390	$9,991	71	91	20	28%
18	Medical and Clinical Laboratory Technicians	$28,970	$9,229	115	134	19	16%
19	Speech-Language Pathologists	$51,490	$15,850	53	71	18	33%
20	Cardiovascular Technologists and Technicians	$30,830	$10,211	41	55	14	34%
21	Chiropractors	$75,220	$26,393	27	37	10	37%
22	Respiratory Therapy Technicians	$33,220	$10,416	26	35	9	34%
23	Opticians, Dispensing	$20,360	$7,161	53	61	8	15%
24	Diagnostic Medical Sonographers	$45,800	$14,434	34	41	7	20%
25	Dietitians and Nutritionists	$41,810	$13,178	41	48	7	17%

Source: Kentuckiana Occupational Outlook

Table 9: Region 10 – Top 25 Anticipated Growth Occupations in Manufacturing

TOP 25 ANTICIPATED GROWTH OCCUPATIONS IN MANUFACTURING, 2002 - 2012							
	Occupation	Median Salary	Average Annual Benefits	# of Jobs 2002	# of Jobs 2012	Projected Job Growth	% Growth 2002-2012
1	First-Line Supervisors/Managers of Production and Operating Workers	$42,540	$12,864	1,156	1,377	221	19%
2	Welders, Cutters, Solderers, and Brazers	$30,680	$10,722	649	796	147	22%
3	Machinists	$35,400	$12,866	562	643	81	14%
4	Inspectors, Testers, Sorters, Samplers, and Weighers	$25,100	$10,585	634	713	79	12%
5	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	$22,150	$8,033	594	672	78	13%
6	Cabinetmakers and Bench Carpenters	$28,030	$11,503	607	684	77	12%
7	Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	$20,790	$7,800	376	448	72	19%
8	Helpers--Production Workers	$21,530	$8,128	730	798	68	9%
9	Packaging and Filling Machine Operators and Tenders	$24,830	$9,127	451	519	68	15%
10	Production Workers, All Other	$27,286	$10,197	534	602	68	12%
11	Team Assemblers	$30,170	$11,651	2,379	2,431	52	2%
12	Computer-Controlled Machine Tool Operators, Metal and Plastic	$30,710	$10,556	247	296	49	19%
13	Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	$27,440	$9,624	219	262	43	19%
14	Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	$23,820	$9,120	202	241	39	19%
15	Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic	$29,470	$10,116	225	264	39	17%
16	Printing Machine Operators	$31,690	$11,616	308	346	38	12%
17	Metal Workers and Plastic Workers, All Other	$30,376	$10,895	193	225	32	16%
18	Water and Liquid Waste Treatment Plant and System Operators	$30,440	$10,894	174	197	23	13%
19	Cutting and Slicing Machine Setters, Operators, and Tenders	$28,820	$11,458	121	142	21	17%
20	Fiberglass Laminators and Fabricators	$24,890	$8,624	103	124	21	20%
21	Laundry and Dry-Cleaning Workers	$15,250	$5,481	187	208	21	11%
22	Paper Goods Machine Setters, Operators, and Tenders	$27,440	$9,750	129	150	21	16%
23	Slaughterers and Meat Packers	$22,330	$7,779	182	203	21	11%
24	Tool and Die Makers	$43,660	$14,738	207	228	21	10%
25	Woodworking Machine Setters, Operators, and Tenders, Except Sawing	$23,570	$9,078	413	434	21	5%

Source: Kentuckiana Occupational Outlook

Table 10: Region 10 – Top 25 Anticipated Growth Occupations in Logistics

TOP 25 ANTICIPATED GROWTH OCCUPATIONS IN LOGISTICS, 2002 - 2012							
	Occupation	Median Salary	Average Annual Benefits	# of Jobs 2002	# of Jobs 2012	Projected Job Growth	% Growth 2002-2012
1	Truck Drivers, Heavy and Tractor-Trailer	$31,480	$10,608	2,448	2,949	501	20%
2	Truck Drivers, Light or Delivery Services	$23,970	$8,422	889	1,045	156	17%
3	Industrial Truck and Tractor Operators	$25,830	$8,771	759	852	93	12%
4	Packers and Packagers, Hand	$17,420	$5,872	1,076	1,153	77	7%
5	Bus Drivers, School	$30,520	$9,152	214	252	38	17%
6	Machine Feeders and Offbearers	$22,890	$8,365	331	369	38	11%
7	Laborers and Freight, Stock, and Material Movers, Hand	$20,640	$7,488	2,078	2,105	27	1%
8	Bus Drivers, Transit and Intercity	$26,680	$8,816	164	185	21	12%
9	First-Line Supervisors/Managers of Transportation and Material-Moving Machine and Vehicle Operators	$39,300	$12,427	209	229	20	9%
10	First-Line Supervisors/Managers of Helpers, Laborers, and Material Movers, Hand	$36,990	$10,902	144	160	16	11%
11	Motor Vehicle Operators, All Other	$23,906	$8,091	71	86	15	21%
12	Taxi Drivers and Chauffeurs	$17,690	$6,448	68	80	12	17%
13	Cleaners of Vehicles and Equipment	$17,710	$6,448	316	327	11	3%
14	Parking Lot Attendants	$15,690	$5,270	67	77	10	14%
15	Airline Pilots, Copilots, and Flight Engineers	$125,030	$41,562	39	48	9	23%
16	Crane and Tower Operators	$33,620	$11,245	67	76	9	13%
17	Excavating and Loading Machine and Dragline Operators	$33,020	$10,714	100	109	9	9%
18	Refuse and Recyclable Material Collectors	$24,330	$7,926	100	108	8	8%
19	Conveyor Operators and Tenders	$26,180	$8,557	59	66	7	11%
20	Commercial Pilots	$43,810	$15,110	25	31	6	24%
21	Material Moving Workers, All Other	$28,176	$9,312	63	68	5	7%
22	Transportation Workers, All Other	$37,297	$12,246	30	34	4	13%
23	Ambulance Drivers and Attendants, Except Emergency Medical Technicians	$17,430	$5,997	8	10	2	25%
24	Hoist and Winch Operators	$28,630	$9,478	10	12	2	20%
25	Aircraft Cargo Handling Supervisors	$43,840	$12,656	6	7	1	16%
Source: Kentuckiana Occupational Outlook							

Online Survey and Industry Focus Group Notes

Over the next few pages, a summary of the takeaways from the Region 10 healthcare and manufacturing focus groups will be presented.

Employer Interview Comments

- Cannot find anyone with knowledge of **chemistry** or chemical products; too many fork lift drivers!
- No skills for **tooling** – takes years to perfect. Ads go unanswered for weeks.
- May need **RNs** in the future; **medical assistants** from local programs need **more clinical exposure** and less office based education.
- Bad time finding people who are **responsible**, have a **good work ethic**, follow up on sales calls, do a full day's work.
- Employees lack **CNC routing skills**, **math skills**, computers
- Shortages exist in **assembly workers**; requires good hand-eye coordination, manual dexterity and speed.
- Shortages exist in **shipping and receiving** – lack of organizational skills to have job success – and **machine operators**.
- No current shortages due to lack of business; in future, will need **skilled welders**. No program in local area teaches more than basic metalworking skills – not enough.
- Occupations in shortage include **assemblers, programmers, technical writers, sales engineers, machinists, and engineering technicians**.
- Difficulty keeping production positions filled due to lack of English skills.
- Spending thousands to lure experienced truck drivers to company; also need diesel maintenance mechanics.

The online survey results represent the sentiments of approximately 28% of companies surveyed. 86% are from the manufacturing/logistics industry; 18% are from health care.

For manufacturing/logistics respondents, the following were occupations marked as most critical and in shortage:

- Production Workers
- Truck Drivers (CDL)
- Machinists
- Inspectors, Testers, Samplers
- Machine Operators
- Industrial Maintenance Technicians

Skills sets identified by the manufacturing/logistics respondents that were both critical and in shortage were as follows:

- Computer/Technology
- Supervisory Skills
- Employability Skills
- Mathematics/Measurements

For health care respondents, the following were occupations marked as most critical and in shortage:

- Registered Nurses
- Laboratory Technicians
- Radiological Technicians
- Respiratory Therapists

Skills sets identified by the health care respondents that were both critical and in shortage were as follows:

- Employability Skills
- Oral Communication Skills (Including Second Language Proficiency)
- Supervisory Skills
- Teamwork

Information shared by the online survey respondents regarding critical occupation shortages is consistent with results produced by the ERISS Survey conducted by the IDWD,

in that the average time needed to fill positions listed in manufacturing/logistics (1-3 months) and the average time needed for health care (2-4 months) shows a clear gap in the employer's ability to produce and/or function fully staffed. Online survey results are included in this report in detail as an attachment.

Key Industry Focus Group Activity

At the focus group session held on October 25, 2005, employers were split into two groups – one for Health Care employers and one for Manufacturing/Logistics employers. Each group had its own facilitator and used the same questions to discuss the gaps in certain critical occupations that their industry was experiencing. Questions asked were as follows:

1. Tell me about current and future trends in your industry.
2. What are the greatest challenges that your industry is experiencing?
3. What do you perceive are critical occupations, both now and in the future?
4. Where do the employees come from who fill these critical occupations?
5. What shortages are you experiencing now in these critical occupations?
6. Describe the impact of said shortages, i.e. loss in production, number of days understaffed, etc. (ref. chart re: time to fill positions)
7. What occupation shortages do you perceive for the future?
8. Why do you think this is happening?

The responses recorded during this section of the focus group were:

Health Care

Nursing and the availability of nurses was identified as a critical issue. The program at IUS is hard to get in and only graduates 30 students per year. Questions were raised as to whether or not this was a capacity issue. Cost of training was also identified as a reason for a lack of nurses. Clinicians trained in orthopedics and obstetrics were also identified as occupations in shortage. At one responding rural health care provider, staff indicated that most nurses were in their 40s and wondered if younger persons were choosing a different vocation. Said

respondent also noted that while larger hospitals can offer scholarships for continuing education, rural providers were limited in their ability to do so. **Overall the occupations noted to be most critical and in shortage were:**

- **Registered Nurses**
- **Licensed Practical Nurses**
- **Radiological Technicians**
- **Respiratory Therapists**

Manufacturing/Logistics

Employers began their discussion by identifying trends and challenges in the industry. Issues that were impacting the industry most significantly included:

- High numbers of applicants with low levels of education (i.e. no GED)
- Increased modernization of equipment – need employees whose skills match technology
- Overseas Competition – low labor costs with comparable quality
- Math Skills and Reading Skills sorely lacking – having to lower assessment standards to qualify enough applicants.
- Industries developing own specialized training (i.e. wood species, precise measurement, etc.) to meet workforce needs
- English as a Second Language

Employers were then organized into four groups to address three key questions – What are critical occupations? Where do employees come from to fill said occupations? What are the shortages you are experiencing in said occupations? Responses were as follows:

	Group 1	Group 2	Group 3	Group 4
Critical Occupations	• Specialty Mill Work • Leadership • Robotics • Computers • Engineering	• Computer • Machinist • CNC Operator • IT Data Organization • Designers	• Maintenance & Electricians • Q/A • Instrumentation/Set Up • CNC Operators • Assemblers	• Lumber Graders • Machinists • Tool Makers • Technologists • Mechanics • Line Engineers • Q/A Mgrs.

Where Do Employees Come From	• Hire on-line • Career Fairs • Temp Services • Local Counties • Local Colleges	• Local Citizens • Recruiting Firms Note: One firm experiencing 50% turnover	• Local Citizens • Salaried Staff – Broader Geographic Reach • Want HS/GED but will accept 8th gr.	• Trade schools & internal applicants • India – Process Engineers • Temp to Hire
Occupation Shortages	• **Bentwood Milling** • **Robotics** • **Computers** • **Engineering** • **Production**	• **Woodworking**	• **Maintenance & Electricians** • **Q/A** • **Instrumentation/Set Up** • **CNC Operators** • **Assemblers** **Note: Train Internally to Accommodate Need**	• **Lumber Graders** • **Machinists** • **Tool Makers** • **Technologists** • **Mechanics** • **Line Engineers** • **Q/A Mgrs.**

Critical Occupation Summary

A number of healthcare occupations were deemed to be both critical and in shortage (or projected to be in shortage) based on the average length of time to fill positions (ERISS survey), employer responses (Region 10 local survey), and employer comments (Region 10 forum). Those occupations and there SOC codes are:

1. Registered Nurses 29-1111
2. Licensed Practical Nurses 29-2061
3. Radiological Technicians 29-2034
4. Respiratory Therapists 29-1126
5. Occupational Therapists 29-1122
6. Pharmacists 29-1051
7. Physical Therapists 29-1123
8. Labratory Techs (Medical & Clinical) 29-2012

The following manufacturing and logistics occupations were reasoned to be both critical and in shortage (or projected to be in shortage) based on the average length of time to

fill positions (ERISS survey), employer responses (Region 10 local survey), and employer comments (Region 10 forum).

1.	First-line Supervisors/Managers	51-1011
2.	Industrial Engineering Techs	17-3026
3.	Computer Techs (support specialists)	15-1041
4.	Welders, Cutters, Solders, & Brazers	51-4121
5.	Industrial Maintenance Technicians	49-9041
6.	Machinists (Metal & Plastic)	51-4041
7.	Inspectors, Testers, Samplers	51-9061
8.	Packaging & Filling Machine Operators	51-9111
9.	Production Workers – Other	51-9199
10.	Truck Drivers – CDL (Heavy Tractor-Trailer)	53-3032

Health Care Occupational Descriptions & Skill Sets

For each health care occupation in the following section, data have been collected from the O*NET website. As requested in the SSI criteria for the Skills Shortages Report, **all of the included occupational descriptions include (1) the skills and credentials required for entry, (2) career pathways, and (3) typical wages and earnings.** The educational and skill requirements are listed in the order of importance to job performance. Education requirements for the occupation, summary statistics, and data for related occupations are also listed. This additional information was collected from the Kentuckiana Occupational Outlook website. Compiling data for related occupations is necessary to understand the importance of specific skill sets and their significance to specialized sectors. Projected growth rates for industries are also listed; this data was retrieved from the O*NET website.

Registered Nurse, SOC Code 29-1111.00

This is a specialized occupation that requires licensing or registration. The general category includes nurse practitioners, clinical nurse specialists, certified nurse midwives, and certified nurse anesthetists. Registered nurses assess patients' health needs, design care plans, maintain medical records, advise patients, and administer health care resources. Projected growth in this field is classified as "faster than average," at a national rate of 21-35% from 2002 to 2012. For this period, Indiana growth is estimated at 24%.

Skill Requirements

Active Listening — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

Reading Comprehension — Understanding written sentences and paragraphs in work related

documents.

Critical Thinking — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

Instructing — Teaching others how to do something.

Speaking — Talking to others to convey information effectively.

Time Management — Managing one's own time and the time of others.

Service Orientation — Actively looking for ways to help people.

Monitoring — Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.

Social Perceptiveness — Being aware of others' reactions and understanding why they react as they do.

Writing — Communicating effectively in writing as appropriate for the needs of the audience.

Source: O*NET (online.onetcenter.org).

Education Requirements

Most registered nurse postions require an associate's degree. Some require a bachelor's degree. Generally, the associate's degree can be obtained after three years of full-time class attendance, and a bachelor's can be obtained in four. Certification or licensing follows formal education on this career path. Associate's degrees may be obtained locally at Ivy Tech State College (Sellersburg, IN) and Jefferson Community College (Louisville, KY). Bellarmine University, Spalding University, and the University of Louisville (all in Louisville, KY) offer bachelor's degrees and master's degrees in nursing. Indiana University Southeast (New Albany, IN) offers a bachelor's degree in nursing.

Summary Statistics

Location	Pay Period	2003				
		10%	25%	Median	75%	90%
United States	Hourly	$17.51	$20.32	$24.53	$29.41	$35.11
	Yearly	$36,400	$42,300	$51,000	$61,200	$73,000
Indiana	Hourly	$15.66	$18.70	$21.64	$25.56	$28.93
	Yearly	$32,600	$38,900	$45,000	$53,200	$60,200

Source: O*NET (online.onetcenter.org).

Related Occupations

The following occupations are sufficiently related in specialization to that of the registered nurse: chiropractor, podiatrist, psychiatric aide, and medical assistant. Data for these occupations are compiled below.

	Median Annual Wages In Dollars	Non-Wage Compensation In Dollar Value	Projected Job Growth for Area 2002-2012
Chiropractor	75,220	26,393	37%
Podiatrist	0	57,325	14%
Psychiatric Aide	20,870	6,470	21%
Medical Assistant	23,330	7,384	60%

Source: www.kentuckianaworks.org/outlook.

Licensed Practical Nurse, SOC Code 29-2061.00

A licensed practical nurse (LPN) usually works under the supervision of a registered nurse. This occupation requires administering care to ill, disabled, or injured patients in a hospital, nursing home, hospice, or home care environment. Projected national growth in this field is classified as "average," at a rate of 10-20% from 2002 to 2012. For this period, Indiana growth is estimated at 13%.

Skill Requirements

Active Listening — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

Reading Comprehension — Understanding written sentences and paragraphs in work related documents.

Time Management — Managing one's own time and the time of others.

Writing — Communicating effectively in writing as appropriate for the needs of the audience.

Critical Thinking — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

Monitoring — Monitoring/Assessing performance of yourself, other individuals, or organizations

to make improvements or take corrective action.

Judgment and Decision Making — Considering the relative costs and benefits of potential actions to choose the most appropriate one.

Service Orientation — Actively looking for ways to help people.

Speaking — Talking to others to convey information effectively.

Active Learning — Understanding the implications of new information for both current and future problem-solving and decision-making.

Source: O*NET (online.onetcenter.org).

Education Requirements

These positions require a specialized certification program followed by licensing. Depending on the pace of the certification program, it can take from 16 months to two years to complete. Locally, these certificates may be obtained at any of the following institutions: Ivy Tech State College (Sellersburg, IN), Jefferson Community and Technical College (Louisville, KY), and Spencerian College (Louisville).

Summary Statistics

Location	Pay Period	2003				
		10%	25%	Median	75%	90%
United States	Hourly	$11.53	$13.43	$15.92	$18.97	$21.78
	Yearly	$24,000	$27,900	$33,100	$39,500	$45,300
Indiana	Hourly	$11.99	$13.85	$15.75	$17.79	$21.01
	Yearly	$24,900	$28,800	$32,800	$37,000	$43,700

Source: O*NET (online.onetcenter.org).

Related Occupations

The following occupations are sufficiently related in specialization to that of the licensed practical nurse: chiropractor, optometrist, psychiatric aide, physician's assistant, respiratory therapist, and dental hygienist. Data for these occupations are compiled below.

	Median Annual Wages In Dollars	Non-Wage Compensation In Dollar Value	Projected Job Growth for Area 2002-2012
Chiropractor	75,220	26,393	37%
Optometrist	68,990	22,525	25%
Psychiatric Aide	20,870	6,470	21%
Physicians Assistant	78,750	22,441	50%
Respiratory Therapist	38,090	11,895	35%
Dental Hygienist	52,310	16,241	42%

Source: www.kentuckianaworks.org/outlook.

Radiological Technician, SOC Code 29-2034.02

These workers manage radiological equipment and administer radiological test to patients for the purpose of diagnosing and treating illnesses and injuries. These positions are supervised by radiologists, usually in a hospital, clinic, or medical office setting. National growth in this field is classified as "faster than average," with a projected rate of 21-35% from 2002 to 2012. For this period, Indiana growth is estimated at 23%.

Skill Requirements

Active Listening — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

Speaking — Talking to others to convey information effectively.

Reading Comprehension — Understanding written sentences and paragraphs in work related documents.

Time Management — Managing one's own time and the time of others.

Critical Thinking — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

Instructing — Teaching others how to do something.

Coordination — Adjusting actions in relation to others' actions.

Social Perceptiveness — Being aware of others' reactions and understanding why they react as they do.

Monitoring — Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.

Active Learning — Understanding the implications of new information for both current and future problem-solving and decision-making.

Source: O*NET (online.onetcenter.org).

Education Requirements

In order for a person to obtain a job in this field, he or she must undergo formal training and receive certification or a degree in radiological technology. Certification generally takes 18 months to two years to complete. Associate's degrees require about three years of training. Certificates may be earned locally at Spencerian College and at Jefferson Community College (both in Louisville, KY). Spencerian College also offers an associate's program. Jefferson Technical College (located in Louisville) offers a degree program similar to a bachelor's curriculum (in credit hours). This program requires more than three years to complete, and it is considered a higher level of certification.

Summary Statistics

Location	Pay Period	2003				
		10%	25%	Median	75%	90%
United States	Hourly	$14.11	$16.70	$20.12	$24.30	$28.03
	Yearly	$29,300	$34,700	$41,800	$50,500	$58,300
Indiana	Hourly	$14.64	$16.43	$18.94	$21.61	$25.16
	Yearly	$30,500	$34,200	$39,400	$44,900	$52,300

Source: O*NET (online.onetcenter.org).

Related Occupations

The following occupations are sufficiently related in specialization to that of the radiological technician: dental assistant, surgical technologist, radiation therapist, cardiovascular technologist, respiratory therapist, and dental hygienist. Data for these occupations are compiled below.

	Median Annual Wages In Dollars	Non-Wage Compensation In Dollar Value	Projected Job Growth for Area 2002-2012
Dental Assistant	30,600	9,737	42%
Surgical Technologist	32,390	9,991	28%
Radiation Therapist	50,210	15,450	30%
Cardiovascular Technologist	30,830	10,211	34%
Respiratory Therapist	38,090	11,895	35%
Dental Hygienist	52,310	16,241	42%

Source: www.kentuckianaworks.org/outlook.

Respiratory Therapist, SOC Code 29-1126.00

A respiratory therapist is a caregiver for patients with breathing disorders and abnormalities. The caregiver must assess and treat ailments using medicine and equipment. A key responsibility for this job is the supervision of respiratory technicians. Nationally, projected growth in this field is categorized as "faster than average," with a rate of 21-35% from 2002-2012. For this period, Indiana growth is estimated at 33%.

Skill Requirements

Active Listening — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

Instructing — Teaching others how to do something.

Reading Comprehension — Understanding written sentences and paragraphs in work related documents.

Critical Thinking — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

Monitoring — Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.

Time Management — Managing one's own time and the time of others.

Speaking — Talking to others to convey information effectively.

Operation Monitoring — Watching gauges, dials, or other indicators to make sure a machine is working properly.

Active Learning — Understanding the implications of new information for both current and future problem-solving and decision-making.

Troubleshooting — Determining causes of operating errors and deciding what to do about it.

Source: O*NET (online.onetcenter.org).

Education Requirements

Most positions for respiratory therapists require an associate's degree. Some require a bachelor's degree. Locally, the only program offered for this position is an associate's degree program offered by Jefferson Community College (Louisville, KY). This program usually takes two to three years to complete.

Summary Statistics

Location	Pay Period	2003				
		10%	25%	Median	75%	90%
United States	Hourly	$15.10	$17.55	$20.22	$23.58	$27.15
	Yearly	$31,400	$36,500	$42,100	$49,000	$56,500
Indiana	Hourly	$14.93	$17.07	$19.37	$21.58	$25.44
	Yearly	$31,100	$35,500	$40,300	$44,900	$52,900

Source: O*NET (online.onetcenter.org).

Related Occupations

The following occupations are sufficiently related in specialization to that of the respiratory therapist: optometrist, surgical technologist, physical therapist, dental hygienist, physician assistant. Data for these occupations are compiled below.

	Median Annual Wages In Dollars	Non-Wage Compensation In Dollar Value	Projected Job Growth for Area 2002-2012
Optometrist	68,990	22,525	25%
Surgical Technologist	32,390	9,991	28%
Physical Therapist	54,860	19,282	37%
Dental Hygienist	52,310	16,241	42%
Physician Assistant	78,750	22,441	50%

Source: www.kentuckianaworks.org/outlook.

Laboratory Technician, SOC code 29-2012.00

Laboratory technicians perform tests on biological samples to aid in the diagnosis, treatment, and prevention of illnesses and infections. The technician can work under the supervision of a medical technologist. Nationally, growth for the period of 2002-2012 has been estimated at 10-20%. For this period, Indiana growth is estimated at 19%.

Skill Requirements

Reading Comprehension — Understanding written sentences and paragraphs in work related documents.

Active Listening — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

Speaking — Talking to others to convey information effectively.

Science — Using scientific rules and methods to solve problems.

Equipment Maintenance — Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.

Instructing — Teaching others how to do something.

Time Management — Managing one's own time and the time of others.

Monitoring — Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.

Judgment and Decision Making — Considering the relative costs and benefits of potential actions to choose the most appropriate one.

Active Learning — Understanding the implications of new information for both current and future problem-solving and decision-making.

Source: O*NET (online.onetcenter.org).

Education Requirements

Many positions require only a certification, but associate's degrees and bachelor's degrees are common for this occupation. Certification may be completed in less than two years. Associate's degrees may be completed in two or three years. Locally, certification is offered by Ivy Tech State College (Sellersburg, IN) and Jefferson Community and Technical College System (Louisville, KY). Associate's degrees are available from Ivy Tech State College and Spencerian College (Louisville).

Summary Statistics

Location	Pay Period	2003				
		10%	25%	Median	75%	90%
United States	Hourly	$9.57	$11.70	$14.49	$17.73	$21.58
	Yearly	$19,900	$24,300	$30,100	$36,900	$44,900
Indiana	Hourly	$9.34	$11.01	$13.40	$16.74	$20.22
	Yearly	$19,400	$22,900	$27,900	$34,800	$42,100

Source: O*NET (online.onetcenter.org).

Related Occupations

The following occupations are sufficiently related in specialization to that of the laboratory technician: nuclear medicine technologist, optometrist, and pharmacist. Data for these occupations are compiled below.

	Median Annual Wages In Dollars	Non-Wage Compensation In Dollar Value	Projected Job Growth for Area 2002-2012
Nuclear Medicine Technologist	42,910	13,380	25%
Optometrist	68,990	22,525	25%
Pharmacist	84,120	25,138	18%

Source: www.kentuckianaworks.org/outlook.

Occupational Therapist, SOC Code 29-1122.00

These professionals are required to assess patients' needs, plan and execute rehabilitative programs, and aid disabled patients in regaining independence in daily activities. Growth for this occupation is categorized as "faster than average," with national growth estimates ranging from 21-37% from 2002 to 2012. For this period, Indiana growth is estimated at 26%.

Skill Requirements

Active Listening — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

Reading Comprehension — Understanding written sentences and paragraphs in work related documents.

Service Orientation — Actively looking for ways to help people.

Writing — Communicating effectively in writing as appropriate for the needs of the audience.

Instructing — Teaching others how to do something.

Speaking — Talking to others to convey information effectively.

Social Perceptiveness — Being aware of others' reactions and understanding why they react as they do.

Time Management — Managing one's own time and the time of others.

Active Learning — Understanding the implications of new information for both current and future problem-solving and decision-making.

Critical Thinking — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

Source: O*NET (online.onetcenter.org).

Education Requirements

Most occupational therapist positions require a four-year bachelor's degree in occupational therapy. Some positions are attainable without a bachelor's degree, but on-the-job experience or vocational training is required in its place. Locally, only Spalding University (Louisville, KY) offers bachelor's and master's degrees in this specialization. The bachelor's degree can be completed in about four years, and the master's degree requires an additional two to three years.

Summary Statistics

Location	Pay Period	2003				
		10%	25%	Median	75%	90%
United States	Hourly	$17.64	$21.36	$25.63	$31.09	$37.42
	Yearly	$36,700	$44,400	$53,300	$64,700	$77,800
Indiana	Hourly	$15.62	$20.48	$24.85	$29.00	$34.46
	Yearly	$32,500	$42,600	$51,700	$60,300	$71,700

Source: O*NET (online.onetcenter.org).

Related Occupations

The following occupations are sufficiently related in specialization to that of the occupational therapist: social and human service assistant, physical therapist, and recreational therapist. Data for these occupations are compiled below.

	Median Annual Wages In Dollars	Non-Wage Compensation In Dollar Value	Projected Job Growth for Area 2002-2012
Social and Human Service Assistant	24,450	7,047	49%
Physical Therapist	54,860	19,282	37%
Recreational Therapist	30,680	8,897	12%

Pharmacist, SOC Code 29-1051.00

This profession requires a worker to interpret, fill, and distribute prescriptions for medicine. A pharmacist works closely with physicians, nurses, and medical assistants to coordinate heath care information, manage resources, and administer care to patients. Projected national growth in this field is "faster than average," at 21-35% from 2002 to 2012. For this period, Indiana growth is estimated at 23%.

Skill Requirements

Active Listening — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

Speaking — Talking to others to convey information effectively.

Reading Comprehension — Understanding written sentences and paragraphs in work related documents.

Mathematics — Using mathematics to solve problems.

Science — Using scientific rules and methods to solve problems.

Critical Thinking — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

Writing — Communicating effectively in writing as appropriate for the needs of the audience.

Instructing — Teaching others how to do something.

Social Perceptiveness — Being aware of others' reactions and understanding why they react as they do.

Active Learning — Understanding the implications of new information for both current and future problem-solving and decision-making.

Source: O*NET (online.onetcenter.org).

Education Requirements

This is a highly specialized field, requiring a professional degree from a post-graduate institution. Prior to practicing pharmacology, a student must obtain a bachelor's degree, which requires about four years of school. Next, the student must attend a medical school to receive a doctorate in pharmacology. Completion time for the professional degree varies. Locally, the only institution that offers a professional program in pharmacology is the University of Louisville (KY).

Summary Statistics

Location	Pay Period	2003				
		10%	25%	Median	75%	90%
United States	Hourly	$28.11	$34.93	$39.67	$44.08	$50.43
	Yearly	$58,500	$72,700	$82,500	$91,700	$104,900
Indiana	Hourly	$30.31	$35.68	$39.26	$42.70	$45.40
	Yearly	$63,000	$74,200	$81,700	$88,800	$94,400

Source: O*NET (online.onetcenter.org).

Related Occupations

The following occupations are sufficiently related in specialization to that of the pharmacist: physician assistant, respiratory therapist, nuclear medicine technologist, podiatrist, and laboratory technician. Data for these occupations are compiled below.

	Median Annual Wages In Dollars	Non-Wage Compensation In Dollar Value	Projected Job Growth for Area 2002-2012
Physician Assistant	78,750	22,441	50%
Respiratory Therapist	38,090	11,895	35%
Nuclear Medicine Technologist	42,910	13,380	25%
Podiatrist	0	57,325	14%
Laboratory Technician	41,330	12,691	16%

Source: www.kentuckianaworks.org/outlook.

Physical Therapist, SOC Code 29-1123.00

A physical therapist works in coordination with other medical care providers to assess a patient's need for treatment to rehabilitate the body from physical disability. The physical therapist designs and implements the therapy plan. Nationally, growth in this industry for the

period 2002-2012 is projected to be 21-35%, or "faster than average." For this period, Indiana growth is estimated at 24%.

Skill Requirements

Active Listening — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

Instructing — Teaching others how to do something.

Time Management — Managing one's own time and the time of others.

Speaking — Talking to others to convey information effectively.

Critical Thinking — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

Learning Strategies — Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.

Science — Using scientific rules and methods to solve problems.

Active Learning — Understanding the implications of new information for both current and future problem-solving and decision-making.

Monitoring — Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.

Reading Comprehension — Understanding written sentences and paragraphs in work related documents.

Source: O*NET (online.onetcenter.org).

Education Requirements

There are several possible career paths that may lead a worker to one of these positions. On-the-job training in athletic training or education in sports medicine may lead a worker to this field. The most direct path is a specialized degree in physical therapy, which can be a certification or a degree. Locally, the only educational program for physical therapy is a master's degree offered by Bellarmine University (Louisville, KY). This can take two years to complete, but the prerequisite bachelor's program requires approximately four years to complete.

Summary Statistics

Location	Pay Period	2003				
		10%	25%	Median	75%	90%
United States	Hourly	$19.67	$23.72	$28.22	$34.03	$42.10
	Yearly	$40,900	$49,300	$58,700	$70,800	$87,600
Indiana	Hourly	$17.19	$23.22	$27.97	$33.30	$42.89
	Yearly	$35,800	$48,300	$58,200	$69,300	$89,200

Source: O*NET (online.onetcenter.org).

Related Occupations

The following occupations are sufficiently related in specialization to that of the physical therapist: athletic trainer, respiratory therapist, and social worker. Data for these occupations are compiled below.

	Median Annual Wages In Dollars	Non-Wage Compensation In Dollar Value	Projected Job Growth for Area 2002-2012
Athletic Trainers	34,510	14,443	26%
Respiratory Therapist	38,090	11,895	35%
Social Workers	29,740	8,582	24%

Source: www.kentuckianaworks.org/outlook.

Manufacturing & Logistics

For each manufacturing and logistics occupation in the following section, data have been collected from the O*NET website. Included are the top ten skill requirements for each occupation, listed in the order of importance to job performance. Education requirements for the occupation, summary statistics, and data for related occupations are also listed. This information was collected from the Kentuckiana Occupational Outlook website. Projected growth rates for industries are also listed; this data was retrieved from the O*NET website.

Production Laborer, SOC code 51-9198.01

These workers generally perform the functions necessary for the operation of production lines. Duties vary widely within and among factories. Nationally, growth is projected to be "slower than average," at 0-9%. For this period, Indiana growth is estimated at 3%.

Skill Requirements

[No general skills met the minimum score requirement to be included in a generalized list. Instead, a set of required abilities is provided below.]

Ability Requirements

Manual Dexterity — The ability to quickly move your hand, your hand together with your arm, or your two hands to grasp, manipulate, or assemble objects.

Extent Flexibility — The ability to bend, stretch, twist, or reach with your body, arms, and/or legs.

Static Strength — The ability to exert maximum muscle force to lift, push, pull, or carry objects.

Trunk Strength — The ability to use your abdominal and lower back muscles to support part of the body repeatedly or continuously over time without 'giving out' or fatiguing.

Dynamic Strength — The ability to exert muscle force repeatedly or continuously over time. This involves muscular endurance and resistance to muscle fatigue.

Explosive Strength — The ability to use short bursts of muscle force to propel oneself (as in jumping or sprinting), or to throw an object.

Multi-limb Coordination — The ability to coordinate two or more limbs (for example, two arms, two legs, or one leg and one arm) while sitting, standing, or lying down. It does not involve performing the activities while the whole body is in motion.

Stamina — The ability to exert yourself physically over long periods of time without getting winded or out of breath.

Arm-Hand Steadiness — The ability to keep your hand and arm steady while moving your arm or while holding your arm and hand in one position.

Dynamic Flexibility — The ability to quickly and repeatedly bend, stretch, twist, or reach out with your body, arms, and/or legs.

Source: O*NET (online.onetcenter.org).

Education Requirements

There are no specific educational requirements for these positions. Many are entry-level, with qualifications based on the ability sets outlined above.

Summary Statistics

Location	Pay Period	2003				
		10%	25%	Median	75%	90%
United States	Hourly	$6.75	$7.81	$9.58	$12.08	$15.16
	Yearly	$14,000	$16,200	$19,900	$25,100	$31,500
Indiana	Hourly	$7.28	$8.29	$10.04	$12.40	$15.41
	Yearly	$15,100	$17,200	$20,900	$25,800	$32,100

Source: O*NET (online.onetcenter.org).

Related Occupations

Due to the general skill set required for these positions, mobility of production workers tends to be lateral, or within the same occupation category. Therefore, no related occupation analysis is appropriate.

Source: www.kentuckianaworks.org/outlook.

Truck Driver (CDL), SOC code 53-3032.01 (heavy)

Workers in this category are required to operate a vehicle in excess of three tons to transport goods or equipment. These workers are responsible for the safety of their cargo and with exercising reasonable care to ensure the safety of other motorists on the roads they travel. Projected national growth for 2002 to 2012, is classified as "average," at 10-20%. For this period, Indiana's growth is estimated at 14%.

Skill Requirements

Operation and Control — Controlling operations of equipment or systems.

Source: O*NET (online.onetcenter.org).

Education Requirements

The certification required to pursue this career path is the commercial driver's license (CDL). Training programs vary in length, but most have job placement programs and high levels of job placement. Locally, the institutions that offer training are Tri-State Semi Driver Training and Ryder Dedicated Logistics Driver Hiring Center (both in Louisville, KY).

Summary Statistics

Location	Pay Period	2003				
		10%	25%	Median	75%	90%
United States	Hourly	$10.07	$12.55	$15.98	$19.93	$23.79
	Yearly	$20,900	$26,100	$33,200	$41,500	$49,500
Indiana	Hourly	$10.21	$13.16	$16.67	$20.61	$24.66
	Yearly	$21,200	$27,400	$34,700	$42,900	$51,300

Source: O*NET (online.onetcenter.org).

Related Occupations

The following occupations are sufficiently related in specialization to that of the truck driver (heavy): truck driver (light), transit bus driver, school bus driver, and industrial truck and tractor operator. Data for these occupations are compiled below.

	Median Annual Wages In Dollars	Non-Wage Compensation In Dollar Value	Projected Job Growth for Area 2002-2012
Truck Driver (Light)	23,970	8,422	17%
Bus Driver, Transit	26,680	8,816	12%
Bus Driver, School	30,520	9,152	17%
Industrial Truck and Tractor Operator	25,830	8,771	12%

Source: www.kentuckianaworks.org/outlook.

Packaging & Filling Machine Operator, SOC Code 51-9111.00

The operators and tenders of packaging and filling machines have various jobs. Each job can correspond with different functions in an assembly pattern. Nationally, growth in this industry is projected to be 21-35%, or "faster than average," for the period 2002-2012. For this period, Indiana growth is estimated at 21%.

Skill Requirements

Reading Comprehension — Understanding written sentences and paragraphs in work related documents.

Quality Control Analysis — Conducting tests and inspections of products, services, or processes to evaluate quality or performance.

Active Listening — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

Operation and Control — Controlling operations of equipment or systems.

Instructing — Teaching others how to do something.

Equipment Maintenance — Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.

Coordination — Adjusting actions in relation to others' actions.

Troubleshooting — Determining causes of operating errors and deciding what to do about it.

Time Management — Managing one's own time and the time of others.

Judgment and Decision Making — Considering the relative costs and benefits of potential actions to choose the most appropriate one.

Source: O*NET (online.onetcenter.org).

Education Requirements

The specialized nature of the machinery is such that on-the-job training is required. Hands-on training is necessary, so many employers provide training sessions for new hires and as new machinery is introduced. Experience with particular machines enhances an employee's marketability in the field. There are no formal training programs in the area.

Summary Statistics

Location	Pay Period	2003				
		10%	25%	Median	75%	90%
United States	Hourly	$7.03	$8.32	$10.56	$13.82	$17.24
	Yearly	$14,600	$17,300	$22,000	$28,700	$35,900
Indiana	Hourly	$8.23	$9.59	$11.26	$15.22	$18.60
	Yearly	$17,100	$19,900	$23,400	$31,700	$38,700

Source: O*NET (online.onetcenter.org).

Related Occupations

The following occupations are sufficiently related in specialization to that of the packaging and filling machine operator: conveyor operator and tender, multiple machine operator, molding, coremaking, and casting worker. Data for these occupations are compiled below.

	Median Annual Wages In Dollars	Non-Wage Compensation In Dollar Value	Projected Job Growth for Area 2002-2012
Conveyor Operator and Tender	26,180	8,557	11%
Multiple Machine Operator	27,440	9,624	19%
Molding, Coremaking, and Casting	20,790	7,800	19%

Source: www.kentuckianaworks.org/outlook.

Inspector, Tester, Sampler, SOC Code 51-9061.05

A worker in this position collects and analyzes test data for quality control, troubleshooting, efficiency planning, and other purposes. The inspector processes the data to derive meaning from it that will be useful to the firm. Nationally, growth for this profession is projected to be "slower than average," or 0-9%, from 2002-2012. For this period, Indiana growth is estimated at 2%.

Skill Requirements

Quality Control Analysis — Conducting tests and inspections of products, services, or processes to evaluate quality or performance.

Mathematics — Using mathematics to solve problems.

Operation Monitoring — Watching gauges, dials, or other indicators to make sure a machine is working properly.

Reading Comprehension — Understanding written sentences and paragraphs in work related documents.

Writing — Communicating effectively in writing as appropriate for the needs of the audience.

Source: O*NET (online.onetcenter.org).

Education Requirements

Several different possible career paths may lead an employee to this position. Technical or vocational training is one possibility, and apprenticeship is another. Experience is critical, so candidates for promotion to these positions are often found in the technical jobs in the appropriate industry. There are no formal training programs in the area, but strong candidates may have education in operations management and statistics.

Summary Statistics

Location	Pay Period	2003				
		10%	25%	Median	75%	90%
United States	Hourly	$8.25	$10.37	$13.56	$18.18	$24.29
	Yearly	$17,200	$21,600	$28,200	$37,800	$50,500
Indiana	Hourly	$9.37	$11.48	$14.34	$18.63	$23.97
	Yearly	$19,500	$23,900	$29,800	$38,800	$49,900

Source: O*NET (online.onetcenter.org).

Related Occupations

The following occupations are sufficiently related in specialization to that of the inspector, tester, or sampler: multiple machine operator, electro-mechanical technician, mechanical engineering technician, maintenance worker for machinery, industrial engineering technician. Data for these occupations are compiled below.

	Median Annual Wages In Dollars	Non-Wage Compensation In Dollar Value	Projected Job Growth for Area 2002-2012
Multiple Machine Operator	27,440	9,624	19%
Electro-Mechanical Technician	30,770	9,020	10%
Mechanical Engineering Technician	39,840	11,533	19%
Maintenance Worker (Machinery)	33,820	10,991	18%
Industrial Engineering Technician	32,610	10,037	14%

Source: www.kentuckianaworks.org/outlook.

Machinist, SOC Code 51-4041.00

The machinist manufactures parts for machines. Aside from creating the parts, this worker maintains, inspects, customizes, and modifies parts. The machinist is also responsible for observing the machines at all times to ensure they are functioning correctly. Nationally, the projected growth in this field from 2002-2012 is projected to be "slower than average," at a rate of 0-9%. For this period, Indiana growth is estimated at 0%.

Skill Requirements

Operation and Control — Controlling operations of equipment or systems.

Operation Monitoring — Watching gauges, dials, or other indicators to make sure a machine is working properly.

Mathematics — Using mathematics to solve problems.

Equipment Selection — Determining the kind of tools and equipment needed to do a job.

Troubleshooting — Determining causes of operating errors and deciding what to do about it.

Reading Comprehension — Understanding written sentences and paragraphs in work related documents.

Quality Control Analysis — Conducting tests and inspections of products, services, or processes to evaluate quality or performance.

Equipment Maintenance — Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.

Active Learning — Understanding the implications of new information for both current and future problem-solving and decision-making.

Active Listening — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

Source: O*NET (online.onetcenter.org).

Education Requirements

Vocational training is not required for all positions, but it is recommended.

Apprenticeships and work experience are helpful. In this area, the only school that offers technical training for machinists is Jefferson Technical College (Louisville, KY). A certification program

takes about two years to complete. The college also offers a degree that is similar to a bachelor's degree (in credit hours) and is considered a higher certification grade.

Summary Statistics

Location	Pay Period	2003				
		10%	25%	Median	75%	90%
United States	Hourly	$9.91	$12.63	$16.15	$20.16	$24.03
	Yearly	$20,600	$26,300	$33,600	$41,900	$50,000
Indiana	Hourly	$10.99	$13.53	$16.62	$20.21	$23.18
	Yearly	$22,900	$28,100	$34,600	$42,000	$48,200

Source: O*NET (online.onetcenter.org).

Related Occupations

The following occupations are sufficiently related in specialization to that of the machinist: aircraft assembler, model maker, welder, mechanical engineering technician, and inspector. Data for these occupations are compiled below.

	Median Annual Wages In Dollars	Non-Wage Compensation In Dollar Value	Projected Job Growth for Area 2002-2012
Aircraft Assembler	26,380	9,166	30%
Model Maker	48,950	16,284	33%
Welder	30,680	10,722	22%
Mechanical Engineering Technician	39,840	11,533	19%
Inspector, Tester, or Sampler	25,100	10,585	12%

Source: www.kentuckianaworks.org/outlook.

Industrial Maintenance Technician, SOC Code 49-9041.00

These positions involve installing, adjusting, inspecting, repairing, and maintaining industrial machinery, equipment, and systems. Workers must be familiar with the technology and be able to stay abreast of changing technology. National growth in the field from 2002 to 2012 is projected to be "slower than average," at a rate of 0-9%. For this period, Indiana growth is estimated at 7%.

Skill Requirements

Equipment Maintenance — Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.

Repairing — Repairing machines or systems using the needed tools.

Troubleshooting — Determining causes of operating errors and deciding what to do about it.

Operation Monitoring — Watching gauges, dials, or other indicators to make sure a machine is working properly.

Quality Control Analysis — Conducting tests and inspections of products, services, or processes to evaluate quality or performance.

Equipment Selection — Determining the kind of tools and equipment needed to do a job.

Installation — Installing equipment, machines, wiring, or programs to meet specifications.

Operation and Control — Controlling operations of equipment or systems.

Source: O*NET (online.onetcenter.org).

Education Requirements

A specialized knowledge of technical principles is required, and this can be obtained through formal education. Certification and vocational training is available in the area. Jefferson Community and Technical College (Louisville, KY) and Ivy Tech State College (Sellersburg, IN) offer technical certifications and associate's degree programs. Completion can take two or three years.

Summary Statistics

Location	Pay Period	2003				
		10%	25%	Median	75%	90%
United States	Hourly	$12.10	$14.96	$18.63	$22.97	$27.49
	Yearly	$25,200	$31,100	$38,800	$47,800	$57,200
Indiana	Hourly	$13.74	$16.60	$20.06	$24.58	$30.76
	Yearly	$28,600	$34,500	$41,700	$51,100	$64,000

Source: O*NET (online.onetcenter.org).

Related Occupations

The following occupations are sufficiently related in specialization to that of the industrial maintenance technician: aircraft mechanics technician, engine and other machine assembler, and inspector. Data for these occupations are compiled below.

	Median Annual Wages In Dollars	Non-Wage Compensation In Dollar Value	Projected Job Growth for Area 2002-2012
Aircraft Mechanics Technician	43,230	15,111	29%
Engine and Other Machine Assembler	23,140	8,740	11%
Inspector, Tester, or Sampler	25,100	10,585	12%

Source: www.kentuckianaworks.org/outlook.

Welder, SOC Code 51-4121.01

A welder works with extreme heat to form metal, mend metal parts, or fit metal fixtures. Nationally, growth in this field from 2002-2012 is projected at 10-20%, an "average" rate of growth. For this period, Indiana growth is estimated at 13%.

Skill Requirements

Operation and Control — Controlling operations of equipment or systems.

Equipment Selection — Determining the kind of tools and equipment needed to do a job.

Equipment Maintenance — Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.

Mathematics — Using mathematics to solve problems.

Operation Monitoring — Watching gauges, dials, or other indicators to make sure a machine is working properly.

Source: O*NET (online.onetcenter.org).

Education Requirements

Traditionally, welding was an occupation local workers gained by apprenticeships or on-the-job training collateral to another job. Today, vocational schools offer certification programs that are favored by local employers. Jefferson Technical College (Louisville, KY) offers a welding certification program and a specialized degree that is comparable (in credit hours) to a

bachelor's program. This is classified as a higher level of certification. These programs can require two to four years for completion.

Summary Statistics

Location	Pay Period	2003				
		10%	25%	Median	75%	90%
United States	Hourly	$9.59	$11.69	$14.39	$17.71	$21.99
	Yearly	$19,900	$24,300	$29,900	$36,800	$45,700
Indiana	Hourly	$9.84	$11.88	$14.43	$17.33	$21.78
	Yearly	$20,500	$24,700	$30,000	$36,000	$45,300

Source: O*NET (online.onetcenter.org).

Related Occupations

The following occupations are sufficiently related in specialization to that of the welder: foundry mold and coremaker, cutter and trimmer, molding worker, and grinding and polishing worker. Data for these occupations are compiled below.

	Median Annual Wages In Dollars	Non-Wage Compensation In Dollar Value	Projected Job Growth for Area 2002-2012
Foundry Mold and Coremaker	32,240	12,338	17%
Cutter and Trimmer	26,090	11,373	17%
Molding, Coremaking, and Casting	20,790	7,800	19%
Grinding and Polishing Worker	22,920	8,149	13%

Source: www.kentuckianaworks.org/outlook.

Computer Technician, SOC Code 15-1041.00

These careers involve the application of computer knowledge to solve problem and repair hardware and software. Technical assistance may be provided in person or remotely, and the worker's duties may involve repair or advice. National growth in this field is projected to be "faster than average," at 21-35% from 2002 to 2012. For this period, Indiana growth is estimated at 20%.

Skill Requirements

Troubleshooting — Determining causes of operating errors and deciding what to do about it.

Reading Comprehension — Understanding written sentences and paragraphs in work related documents.

Critical Thinking — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

Active Listening — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

Writing — Communicating effectively in writing as appropriate for the needs of the audience.

Speaking — Talking to others to convey information effectively.

Active Learning — Understanding the implications of new information for both current and future problem-solving and decision-making.

Learning Strategies — Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.

Instructing — Teaching others how to do something.

Complex Problem Solving — Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.

Source: O*NET (online.onetcenter.org).

Education Requirements

This occupation requires a specialized knowledge of computer technology and telecommunications systems. Several local schools offer degree in applicable programs. Associate's degree programs are offered at Indiana University Southeast (New Albany, IN), ITT

Technical Institute (Louisville, KY), Ivy Tech State College (Sellersburg, IN), Jefferson Community College (Louisville), and Sullivan College (Louisville). Bachelor's degrees are available at Bellarmine College (Louisville), Indiana University Southeast, ITT Technical Institute, Sullivan University, and the University of Louisville (KY). Master's degree programs are offered at Sullivan University and the University of Louisville. Certificates in computer technology are available at Jefferson Technical College (Louisville) and Sullivan University.

Summary Statistics

Location	Pay Period	2003				
		10%	25%	Median	75%	90%
United States	Hourly	$11.39	$14.70	$19.18	$25.27	$33.13
	Yearly	$23,700	$30,600	$39,900	$52,600	$68,900
Indiana	Hourly	$9.59	$12.72	$16.69	$21.38	$26.85
	Yearly	$19,900	$26,500	$34,700	$44,500	$55,800

Source: O*NET (online.onetcenter.org).

Related Occupations

The following occupations are sufficiently related in specialization to that of the computer technician: numerical tool and process control programmer and computer and office machine repairer. Data for these occupations are compiled below.

	Median Annual Wages In Dollars	Non-Wage Compensation In Dollar Value	Projected Job Growth for Area 2002-2012
Numerical Tool and Process Control Programmer	33,820	12,383	20%
Computer and Office Machine Repairer	27,750	9,053	11%

Source: www.kentuckianaworks.org/outlook.

Industrial Engineering Technician, SOC Code 17-3026.00

Industrial engineering technicians play an important role in an industry that is rapidly changing in this area. As industrial firms vie to remain competitive, efficiency is a key consideration. These workers analyze systems, processes, and designs, applying engineering principles to increase or maintain efficiency and capacity. These engineers may accept positions on cross-functional teams. Projected growth for this occupation from 2002 to 2012 is categorized as "slower than average," at a rate of 0-9% nationally. For this period, Indiana growth is estimated at 6%.

Skill Requirements

Active Listening — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

Complex Problem Solving — Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.

Critical Thinking — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

Judgment and Decision Making — Considering the relative costs and benefits of potential actions to choose the most appropriate one.

Coordination — Adjusting actions in relation to others' actions.

Active Learning — Understanding the implications of new information for both current and future problem-solving and decision-making.

Reading Comprehension — Understanding written sentences and paragraphs in work related documents.

Instructing — Teaching others how to do something.

Speaking — Talking to others to convey information effectively.

Monitoring — Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.

Source: O*NET (online.onetcenter.org).

Education Requirements

An acute understanding of industrial processes is required for these positions, so a successful candidate will be proficient in engineering theory and principles. Locally, institutions offer certification and degree programs to prepare workers for these jobs. Ivy Tech State College (Sellersburg, IN) and Jefferson Community College (Louisville, KY) offer certification and associate's degree programs, which take two to three years for completion. The University of Louisville (KY) offers a bachelor's degree program in this specialization, which generally takes four years to complete.

Summary Statistics

Location	Pay Period	2003				
		10%	25%	Median	75%	90%
United States	Hourly	$13.41	$16.33	$20.61	$26.75	$34.63
	Yearly	$27,900	$34,000	$42,900	$55,600	$72,000
Indiana	Hourly	$13.63	$16.94	$20.00	$24.70	$31.23
	Yearly	$28,400	$35,200	$41,600	$51,400	$65,000

Source: O*NET (online.onetcenter.org).

Related Occupations

The following occupations are sufficiently related in specialization to that of the industrial engineering technician: industrial engineer, materials engineer, and inspector. Data for these occupations are compiled below.

	Median Annual Wages In Dollars	Non-Wage Compensation In Dollar Value	Projected Job Growth for Area 2002-2012
Industrial Engineer	58,080	18,176	25%
Materials Engineer	58,600	17,466	13%
Inspector, Tester, or Sampler	25,100	10,585	12%

Source: www.kentuckianaworks.org/outlook.

Production Supervisor, SOC Code 51-1011.00

Workers in these positions must supervise activities of production workers, identify potential problems, coordinate resources, and oversee general operations. These workers are required to manage people, machines, and processes. Projected national growth in the sector is categorized as "average," at a rate of 10-20% from 2002 to 2012. For this period, Indiana growth is estimated at 7%.

Skill Requirements

Coordination — Adjusting actions in relation to others' actions.

Critical Thinking — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

Reading Comprehension — Understanding written sentences and paragraphs in work related documents.

Speaking — Talking to others to convey information effectively.

Time Management — Managing one's own time and the time of others.

Mathematics — Using mathematics to solve problems.

Judgment and Decision Making — Considering the relative costs and benefits of potential actions to choose the most appropriate one.

Management of Personnel Resources — Motivating, developing, and directing people as they work, identifying the best people for the job.

Writing — Communicating effectively in writing as appropriate for the needs of the audience.

Management of Material Resources — Obtaining and seeing to the appropriate use of equipment, facilities, and materials needed to do certain work.

Source: O*NET (online.onetcenter.org).

Education Requirements

No formal education requirement exists, but management courses or experience may increase a candidate's marketability. Experience in a specific field is critical for this job. Therefore, it is common for supervisors to be promoted from the ranks of the production workers.

Summary Statistics

Location	Pay Period	2003				
		10%	25%	Median	75%	90%
United States	Hourly	$12.78	$16.34	$21.23	$27.38	$34.67
	Yearly	$26,600	$34,000	$44,200	$57,000	$72,100
Indiana	Hourly	$13.54	$16.59	$21.08	$26.58	$33.46
	Yearly	$28,200	$34,500	$43,800	$55,300	$69,600

Source: O*NET (online.onetcenter.org).

Related Occupations

The following occupations are sufficiently related in specialization to that of the production supervisor: first-line supervisor of laborers, industrial production manager, and industrial engineering technician. Data for these occupations are compiled below.

	Median Annual Wages In Dollars	Non-Wage Compensation In Dollar Value	Projected Job Growth for Area 2002-2012
First-Line Supervisor of Laborers	36,990	10,902	11%
Industrial Production Manager	65,430	20,516	18%
Industrial Engineering Technician	32,610	10,037	14%

Source: www.kentuckianaworks.org/outlook.

Section IV: Size and Location of Short and Long-term Occupational Shortages

The results of the employee availability estimates for the critical occupations identified in the previous section will be presented here. No one methodology worked for each occupation under consideration due to the data. No one data source (ERISS survey, Region 10 Survey, Region 10 Forum, etc.) had complete information for every single occupation. Therefore our analysis and computations required a combination of data and judgment. By combining these method and sources we were able to ensure that our results reflected a broad distribution of employers across the various counties within Region 10.

For example, by combining our own survey with an employer forum we were able to obtain data regarding the targeted healthcare occupations from two hospitals in different counties in the region (Harrison and Floyd counties). This was required due to the fact that the ERISS survey did not have any survey respondents from the hospital sub-sector for Region 10.

Occupational Demand Estimation

Both the ERISS and Region 10 survey provided data on current openings for various occupations. For both surveys we were able to determine both existing openings and anticipated growth at the company level. As specificity is called for as much as possible in identifying critical shortages, the participants of the surveys and forums are listed in Appendix C of this report.

In order to estimate the demand for most occupations we began our approximation by using the estimated job vacancies at the end of 2005. To determine this number we estimated current openings from the ERISS survey and from our own survey of employers. As the response rates were both surveys were below 30%, we were confident that this gave a minimum

number for demand. In fact, given the survey response rate and input from the employer forum participants, we felt reasonably safe in assuming that the lower estimate for current job vacancies was ten to fifteen percent higher than whatever the current openings number was. In some cases no demand number could be obtained from either survey. In those situations the percentage of openings in related fields was used to approximate current openings.

Where possible, high and low anticipated one year growth rates were developed for an occupation at the regional level from the ERISS survey data and/or the local survey data in order to determine short-run projections. In situations where there wasn't sufficient regional data to make such a computation the statewide growth rates from the same ERISS survey were utilized. Finally, if neither of these rates were available, the anticipated annualized growth rates from the industry and occupational projections (2002 – 2012) provided in the SSI Analysis Toolkit were used to develop demand projections.

For short-run growth (2005 – 2007) the lowest estimated growth rate from the ERISS survey (sometimes zero) was applied to the lower demand projections and the highest estimated rate was applied to the upper demand projections. The mid-point was used for the most likely demand S-R projections.

For longer run demand estimates, annualized increases from growth and replacements were used from the 2002-2012 projection data supplied in the SSI Analysis Toolkit. Where it appeared that recent growth (2002 – 2004) was significantly different from the original projections, historical growth rates were extrapolated out to 2012. A range of 50% above and below this number was usually assumed for the upper and lower estimates, respectively for years beyond 2007.

Occupational Supply Estimation

There are a number of issues to computing occupational supply (demand also) thare are complicated by commuting and migration patterns. As would be expected, commuting patterns indicate a large amount of intra-regional commuting for Region 10, especially between Clark, Floyd, Harrison, Washington, and Scott counties. Commuting to Indiana counties outside of EGR 10 happens, but in relatively small numbers (the largest such commuting occurring with Orange, Jefferson, & Jackson counties).

There is a very large amount of commuter activity between Region 10 and surrounding counties in Kentucky. There are 35,655 Region 10 residents who commute to the Kentucky side of the Ohio River, with ninety-eight percent of those working in Jefferson County KY. The majority of these commuters come from Clark and Floyd counties (47% & 33% respectively). There are 13,161 Kentucky residents who commute into Region 10, eighty-one percent of which come from Jefferson County, Kentucky. Sixty-five percent and twenty-four percent of those crossing the river to work in Indiana go to jobs in Clark and Floyd counties, respectively. The ratio of Kentucky residents commuting to Region 10 to Region 10 residents commuting to Kentucky is almost 3 to 1 (2.7:1)

Of course, many of the Indiana residents who commute to Kentucky could well be former Kentucky residents who moved into the Southern Indiana region from Louisville. Statistics gathered by Professor Paul Combs at the University of Louisville show a net migration out of Jefferson County Kentucky into Southern Indiana Counties from 1995 to 2000 (as well as to surrounding Kentucky counties)[3]. Some 8500 individuals moved from Jefferson County to Southern Indiana during this time period (most to Clark, Floyd, and Harrison Counties). Going in the opposite direction 4900 people moved from Southern Indiana to Jefferson Co. For every

[3] Michael Price and Paul Coomes, *Human Linkages: The Louisville Migration Report*, 2005.

person who moved from So. Indiana to Jefferson Co. KY nearly 2 persons made the reverse move.

During the 1990 – 2003 period average annual net migration to the Louisville MSA was 2.8 per 1,000 persons. This MSA includes most of the counties in Indiana's Region 10[4]. In-migration tends to slow during recessive economic periods and the net migration to the Louisville MSA dropped to 0.10 per 1000 persons during the 2000-01 period. These migration patterns were similar across both industries and occupations with the exception of production occupations and installation, maintenance, and repair occupations. Net migration for the Louisville MSA was negative for these occupations with workers leaving for Atlanta, Indianapolis, Dallas, Raleigh-Durham, Denver, and Richmond to name a few.

When computing migration for various occupations the historical positive net in migration of 2.8 per 1000 was assumed. As it is uncertain that the negative net migration flows for installation, maintenance, and repair workers and for production workers would continue, a zero net migration was assumed for those occupations.

Around ninety percent of IUS nursing grads reported "staying in the area" which means ten percent leave. However, if "in the area" means the Louisville MSA then a portion of the remaining ninety percent could be employed outside of Region 10. Given the fairly significant number of Kentucky residents who pursue their education at Indiana institutions it wouldn't be inconceivable that there are significant leakages. This seems to be confirmed by discussions with industry representatives. Nevertheless, a conservative 10% number was utilized for out-migration.

For situations where there were no suppliers of a particular occupation in Region 10 (Radiologicial Tech for example) we realize that there must be some sort of significant in-

[4] The Louisville MSA for Professor Coomes' study includes all of EGR 10 plus Orange and Jefferson counties.

migration in order to fill positions. A portion of these positions are likely filled from suppliers in the Louisville area but we received no feedback from either the education providers or the employers for these occupations. Although estimates on the number of graduates for an area could be obtained there are no good approximations that are readily available regarding how many of those graduates choose to work in Southern Indiana. In these cases it was assumed that at least 50% of any new demand per year (using the most likely estimates) would be met by providers from the Kentucky side of the river.

Some of the above issues are very good reasons for developing a range of estimates as opposed to a point estimate. A great deal of effort went into determining a low and high range for each occupation in order to develop confidence that the true shortages (or surpluses) are somewhere between the computed lower and upper bounds.

Occupational Shortages in Healthcare, Manufacturing, & Logistics Occupations

A great deal of emphasis has been placed on the importance of developing actual numbers regarding any shortages, not just anecdotal evidence from a few interested parties. Due to this importance the summary tables showing net demand and supply for each of the critical occupations that were believed to be experiencing shortages are presented on the following pages. From Section III above, a number of healthcare occupations were deemed to be both critical and in shortage (or projected to be in shortage) based on the average length of time to fill positions (ERISS survey), employer responses (Region 10 local survey), and employer comments (Region 10 forum). Those occupations and there SOC codes are:

1. Registered Nurses 29-1111
2. Licensed Practical Nurses 29-2061
3. Radiological Technicians 29-2034
4. Respiratory Therapists 29-1126

5. Occupational Therapists 29-1122
6. Pharmacists 29-1051
7. Physical Therapists 29-1123
8. Labratory Techs (Medical & Clinical) 29-2012

Tables 11 through 18 contain the computations for healthcare occupations. The data indicates a potential short-run (through 2007) shortage for RNs, but not for LPNs. This data is contrary to some of the comments from various employers in our region. The anecdotal evidence suggests both a short-run and long-run (through 2012) shortage for both of these occupations. There is a large demand for many medical occupations within the Louisville MSA and for these occupations it is very likely that the out-migration to Kentucky counties is being underestimated in the projections.

For respiratory therapists, shortages are predicted both in the short-run and long-run for middle and upper projections. Persistent, and sometimes large, shortages are estimated for radiological techs, occupational therapists, pharmacists, lab techs, and physical therapists under all projection (lower, middle, & upper) scenarios.

In Section III above, the following manufacturing and logistics occupations were reasoned to be both critical and in shortage (or projected to be in shortage) based on the average length of time to fill positions (ERISS survey), employer responses (Region 10 local survey), and employer comments (Region 10 forum).

1. First-line Supervisors/Managers 51-1011
2. Industrial Engineering Techs 17-3026
3. Computer Techs (support specialists) 15-1041
4. Welders, Cutters, Solders, & Brazers 51-4121
5. Industrial Maintenance Technicians 49-9041
6. Machinists (Metal & Plastic) 51-4041

7. Inspectors, Testers, Samplers 51-9061
8. Packaging & Filling Machine Operators 51-9111
9. Production Workers – Other 51-9199
10. Truck Drivers – CDL (Heavy Tractor-Trailer) 53-3032

Tables 19 through 28 contain the demand and supply computations for manufacturing and logistics occupations. For manufacturing, persistent short-run and long-run shortages are forecast for first-line supervisors/managers, welders, machinists, packaging & filling machine operators, and production workers across all scenarios. Shortages are also forecast at the middle and upper projections for Inspectors/testers/samplers, industrial maintenance technicians, and, to a lesser degree, computer techs. Although anecdotal evidence implies a shortage in the area of industrial engineering techs, the forecasts do not bear this out. This issue was discussed industry representatives and it was determined that the likely explanation for the discrepancy lies in the O*NET naming format. Some of the O*NET nomenclature is outdated. The specific occupations that are likely in shortage which would not have been captured in either the ERISS survey or the local survey are[5]:

- 49-9044.00 Millwright (These are mechanical maintenance people)
- 49-9041.00 Industrial Machinery Mechanic
- 17-3023.01 Electronic Engineering Technician
- 17-3023.03 Electrical Engineering Technician
- 17-3023.02 Calibration/ Instrumentation Technician
- 49-9042.00 Maintenance Repairer
- 17-3027.00 Mechanical Engineering Technician

[5] Thanks to Paul Perkins at Amatrol for providing this list and rational for apparent discrepancies in the anecdotal and empirical evidence relating to shortages for industrial engineering techs.

- 49-2094.00 Electrical Electronic Repairers
- 17-3024.00 Electro-mechanical Technician
- 49-9043.00 Machinery Maintenance Worker

It is very likely that this issue is also causing the estimates for the industrial maintenance technicians to be diluted also.

Table 20 shows fairly large short-run and long-run shortages for truck drivers. The trucking industry has faced a set of unique circumstances which have hampered the supply. Since September 11, 2001, more rigid federal regulations have decreased the number of graduates per year. As reported in the *Kentuckiana Occupational Outlook* (2003), there was an approximate 20% to 25% decline in the number of CDL (commercial driving license) graduates across the state of Kentucky with similar impacts in the Louisville MSA and Southern Indiana region. The industry faces extremely high turnover rates as drivers switch companies in search of higher pay. This is evident in the projections and a large portion of the new demand is a direct result of the relatively high turnover for these occupations. Of course, it is entirely possible that if fuel costs remain relatively high that the demand for this occupation may be tempered somewhat.

Table 11: Shortage calculations – Registered Nurses

Worksheet for Calculating Shortages or Surpluses of One Occupation								
EGR Name:	Region 10							
Occupation Name:	Registered Nurses							
Occupation SOC:	29-1111							
A. Lower projection:								
Total, all industries in EGR								
Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		34	-14	-63	-116	-168	-221	-273
New demand during year		34	34	30	30	30	30	30
New production during year		100	100	100	100	100	100	100
Net migration during year		-17	-17	-17	-17	-17	-17	-17
Net change during year		-49	-49	-53	-53	-53	-53	-53
Carryover to next year (+/-)	34	-14	-63	-116	-168	-221	-273	-326
B. Middle projection:								
Total, all industries in EGR								
Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		60	39	19	-3	-26	-49	-71
New demand during year		62	63	60	60	60	60	60
New production during year		100	100	100	100	100	100	100
Net migration during year		-17	-17	-17	-17	-17	-17	-17
Net change during year		-21	-20	-23	-23	-23	-23	-23
Carryover to next year (+/-)	60	39	19	-3	-26	-49	-71	-94
C. Upper projection:								
Total, all industries in EGR								
Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		90	102	119	126	133	141	148
New demand during year		95	99	90	90	90	90	90
New production during year		100	100	100	100	100	100	100
Net migration during year		-17	-17	-17	-17	-17	-17	-17
Net change during year		12	17	7	7	7	7	7
Carryover to next year (+/-)	90	102	119	126	133	141	148	155

Notes:

(1) A positive (+) carryover indicates a "shortage" of workers in this occupation. A negative (-) carryover indicates the opposite.

(2) This worksheet allows for "ranges" of estimates and projections in recognition of the fact that these values cannot be known with certainty. The meanings of the words "Lower," "Middle," and "Upper" are as follows:

A. "Lower" means that your EGR thinks the probablity is no more than 25% that the true value lies below it.
B. "Middle" means that your EGR thinks the probability is about equal that the true value lies either below it or above it.
C. "Upper" means that your EGR thinks the probablity is no more than 25% that the true value lies above it.

Table 12: Shortage calculations - Licensed Practical Nurses

Worksheet for Calculating Shortages or Surpluses of One Occupation								
EGR Name:	Region 10							
Occupation Name:	Licensed Practical Nurses							
Occupation SOC:	29-2061							
A. Lower projection:								
Total, all industries in EGR								
Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		9	-29	-67	-103	-138	-174	-210
New demand during year		8	8	10	10	10	10	10
New production during year		55	55	55	55	55	55	55
Net migration during year		-9	-9	-9	-9	-9	-9	-9
Net change during year		-38	-38	-36	-36	-36	-36	-36
Carryover to next year (+/-)	9	-29	-67	-103	-138	-174	-210	-246
B. Middle projection:								
Total, all industries in EGR								
Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		20	-5	-30	-55	-81	-107	-133
New demand during year		21	21	20	20	20	20	20
New production during year		55	55	55	55	55	55	55
Net migration during year		-9	-9	-9	-9	-9	-9	-9
Net change during year		-25	-25	-26	-26	-26	-26	-26
Carryover to next year (+/-)	20	-5	-30	-55	-81	-107	-133	-159
C. Upper projection:								
Total, all industries in EGR								
Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		30	15	2	-14	-30	-45	-61
New demand during year		31	32	30	30	30	30	30
New production during year		55	55	55	55	55	55	55
Net migration during year		-9	-9	-9	-9	-9	-9	-9
Net change during year		-15	-13	-16	-16	-16	-16	-16
Carryover to next year (+/-)	30	15	2	-14	-30	-45	-61	-77

Notes:

(1) A positive (+) carryover indicates a "shortage" of workers in this occupation. A negative (-) carryover indicates the opposite.

(2) This worksheet allows for "ranges" of estimates and projections in recognition of the fact that these values cannot be known with certainty. The meanings of the words "Lower," "Middle," and "Upper" are as follows:

A. "Lower" means that your EGR thinks the probablity is no more than 25% that the true value lies below it.

B. "Middle" means that your EGR thinks the probability is about equal that the true value lies either below it or above it.

C. "Upper" means that your EGR thinks the probablity is no more than 25% that the true value lies above it.

Table 13: Shortage calculations - Radiological Technicians

Worksheet for Calculating Shortages or Surpluses of One Occupation

EGR Name:	Region 10
Occupation Name:	Radiological Technicians
Occupation SOC:	29-2034

A. Lower projection:

Total, all industries in EGR

Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		2	3	3	6	10	13	16
New demand during year		2	2	5	5	5	5	5
New production during year		0	0	0	0	0	0	0
Net migration during year		2	2	2	2	2	2	2
Net change during year		0	1	3	3	3	3	3
Carryover to next year (+/-)	2	3	3	6	10	13	16	19

B. Middle projection:

Total, all industries in EGR

Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		4	7	10	18	27	35	43
New demand during year		5	5	10	10	10	10	10
New production during year		0	0	0	0	0	0	0
Net migration during year		2	2	2	2	2	2	2
Net change during year		3	3	8	8	8	8	8
Carryover to next year (+/-)	4	7	10	18	27	35	43	51

C. Upper projection:

Total, all industries in EGR

Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		7	12	17	31	44	57	70
New demand during year		7	7	15	15	15	15	15
New production during year		0	0	0	0	0	0	0
Net migration during year		2	2	2	2	2	2	2
Net change during year		5	6	13	13	13	13	13
Carryover to next year (+/-)	7	12	17	31	44	57	70	84

Notes:

(1) A positive (+) carryover indicates a "shortage" of workers in this occupation. A negative (-) carryover indicates the opposite.

(2) This worksheet allows for "ranges" of estimates and projections in recognition of the fact that these values cannot be known with certainty. The meanings of the words "Lower," "Middle," and "Upper" are as follows:

A. "Lower" means that your EGR thinks the probablity is no more than 25% that the true value lies below it.
B. "Middle" means that your EGR thinks the probability is about equal that the true value lies either below it or above it.
C. "Upper" means that your EGR thinks the probablity is no more than 25% that the true value lies above it.

Table 14: Shortage calculations - Respiratory Therapists

Worksheet for Calculating Shortages or Surpluses of One Occupation								
EGR Name:	Region 10							
Occupation Name:	Respiratory Therapists							
Occupation SOC:	29-1126							
A. Lower projection:								
Total, all industries in EGR								
Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		8	5	3	-5	-13	-21	-29
New demand during year		8	8	5	5	5	5	5
New production during year		12	12	15	15	15	15	15
Net migration during year		-2	-2	-2	-2	-2	-2	-2
Net change during year		-2	-2	-8	-8	-8	-8	-8
Carryover to next year (+/-)	8	5	3	-5	-13	-21	-29	-37
B. Middle projection:								
Total, all industries in EGR								
Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		15	21	27	24	21	18	15
New demand during year		16	17	10	10	10	10	10
New production during year		12	12	15	15	15	15	15
Net migration during year		-2	-2	-2	-2	-2	-2	-2
Net change during year		6	6	-3	-3	-3	-3	-3
Carryover to next year (+/-)	15	21	27	24	21	18	15	12
C. Upper projection:								
Total, all industries in EGR								
Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		23	37	52	54	56	58	60
New demand during year		24	25	15	15	15	15	15
New production during year		12	12	15	15	15	15	15
Net migration during year		-2	-2	-2	-2	-2	-2	-2
Net change during year		14	15	2	2	2	2	2
Carryover to next year (+/-)	23	37	52	54	56	58	60	62

Notes:

(1) A positive (+) carryover indicates a "shortage" of workers in this occupation. A negative (-) carryover indicates the opposite.

(2) This worksheet allows for "ranges" of estimates and projections in recognition of the fact that these values cannot be known with certainty. The meanings of the words "Lower," "Middle," and "Upper" are as follows:

A. "Lower" means that your EGR thinks the probablity is no more than 25% that the true value lies below it.
B. "Middle" means that your EGR thinks the probability is about equal that the true value lies either below it or above it.
C. "Upper" means that your EGR thinks the probablity is no more than 25% that the true value lies above it.

Table 15: Shortage calculations - Occupational Therapists

Worksheet for Calculating Shortages or Surpluses of One Occupation								
EGR Name:	Region 10							
Occupation Name:	Occupational Therapists							
Occupation SOC:	29-1122							
A. Lower projection:								
Total, all industries in EGR								
Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		4	5	6	8	9	11	12
New demand during year		4	4	5	5	5	5	5
New production during year		0	0	0	0	0	0	0
Net migration during year		3	3	3	3	3	3	3
Net change during year		1	1	2	2	2	2	2
Carryover to next year (+/-)	4	5	6	8	9	11	12	14
B. Middle projection:								
Total, all industries in EGR								
Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		9	15	21	27	33	39	45
New demand during year		9	9	9	9	9	9	9
New production during year		0	0	0	0	0	0	0
Net migration during year		3	3	3	3	3	3	3
Net change during year		6	6	6	6	6	6	6
Carryover to next year (+/-)	9	15	21	27	33	39	45	51
C. Upper projection:								
Total, all industries in EGR								
Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		13	24	35	46	56	67	77
New demand during year		14	14	14	14	14	14	14
New production during year		0	0	0	0	0	0	0
Net migration during year		3	3	3	3	3	3	3
Net change during year		11	11	11	11	11	11	11
Carryover to next year (+/-)	13	24	35	46	56	67	77	88

Notes:

(1) A positive (+) carryover indicates a "shortage" of workers in this occupation. A negative (-) carryover indicates the opposite.

(2) This worksheet allows for "ranges" of estimates and projections in recognition of the fact that these values cannot be known with certainty. The meanings of the words "Lower," "Middle," and "Upper" are as follows:

A. "Lower" means that your EGR thinks the probablity is no more than 25% that the true value lies below it.
B. "Middle" means that your EGR thinks the probability is about equal that the true value lies either below it or above it.
C. "Upper" means that your EGR thinks the probablity is no more than 25% that the true value lies above it.

Table 16: Shortage calculations - Pharmacists

Worksheet for Calculating Shortages or Surpluses of One Occupation								
EGR Name:	Region 10							
Occupation Name:	Pharmacists							
Occupation SOC:	29-1051							
A. Lower projection:								
Total, all industries in EGR								
Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		5	7	8	10	11	13	15
New demand during year		5	5	5	5	5	5	5
New production during year		0	0	0	0	0	0	0
Net migration during year		3	4	3	3	3	3	3
Net change during year		2	1	2	2	2	2	2
Carryover to next year (+/-)	5	7	8	10	11	13	15	16
B. Middle projection:								
Total, all industries in EGR								
Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		10	17	24	31	37	44	51
New demand during year		10	11	10	10	10	10	10
New production during year		0	0	0	0	0	0	0
Net migration during year		3	4	3	3	3	3	3
Net change during year		7	7	7	7	7	7	7
Carryover to next year (+/-)	10	17	24	31	37	44	51	57
C. Upper projection:								
Total, all industries in EGR								
Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		15	27	41	52	64	76	87
New demand during year		16	17	15	15	15	15	15
New production during year		0	0	0	0	0	0	0
Net migration during year		3	4	3	3	3	3	3
Net change during year		12	13	12	12	12	12	12
Carryover to next year (+/-)	15	27	41	52	64	76	87	99

Notes:

(1) A positive (+) carryover indicates a "shortage" of workers in this occupation. A negative (-) carryover indicates the opposite.

(2) This worksheet allows for "ranges" of estimates and projections in recognition of the fact that these values cannot be known with certainty. The meanings of the words "Lower," "Middle," and "Upper" are as follows:

A. "Lower" means that your EGR thinks the probablity is no more than 25% that the true value lies below it.
B. "Middle" means that your EGR thinks the probability is about equal that the true value lies either below it or above it.
C. "Upper" means that your EGR thinks the probablity is no more than 25% that the true value lies above it.

Table 17: Shortage calculations - Physical Therapists

Worksheet for Calculating Shortages or Surpluses of One Occupation								
EGR Name:	Region 10							
Occupation Name:	Physical Therapists							
Occupation SOC:	29-1123							
A. Lower projection:								
Total, all industries in EGR								
Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		5	6	7	9	11	12	14
New demand during year		5	5	5	5	5	5	5
New production during year		0	0	0	0	0	0	0
Net migration during year		4	4	3	3	3	3	3
Net change during year		1	1	2	2	2	2	2
Carryover to next year (+/-)	5	6	7	9	11	12	14	16
B. Middle projection:								
Total, all industries in EGR								
Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		10	17	25	32	39	45	52
New demand during year		11	12	10	10	10	10	10
New production during year		0	0	0	0	0	0	0
Net migration during year		4	4	3	3	3	3	3
Net change during year		7	8	7	7	7	7	7
Carryover to next year (+/-)	10	17	25	32	39	45	52	59
C. Upper projection:								
Total, all industries in EGR								
Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		15	27	38	50	62	73	85
New demand during year		15	16	15	15	15	15	15
New production during year		0	0	0	0	0	0	0
Net migration during year		4	4	3	3	3	3	3
Net change during year		12	12	12	12	12	12	12
Carryover to next year (+/-)	15	27	38	50	62	73	85	97

Notes:

(1) A positive (+) carryover indicates a "shortage" of workers in this occupation. A negative (-) carryover indicates the opposite.

(2) This worksheet allows for "ranges" of estimates and projections in recognition of the fact that these values cannot be known with certainty. The meanings of the words "Lower," "Middle," and "Upper" are as follows:

A. "Lower" means that your EGR thinks the probablity is no more than 25% that the true value lies below it.
B. "Middle" means that your EGR thinks the probability is about equal that the true value lies either below it or above it.
C. "Upper" means that your EGR thinks the probablity is no more than 25% that the true value lies above it.

Table 18: Shortage calculations - Lab Techs

Worksheet for Calculating Shortages or Surpluses of One Occupation								
EGR Name:	Region 10							
Occupation Name:	Laboratory Technicians (Medical & Clinical Lab Techs)							
Occupation SOC:	29-2012							
A. Lower projection:								
Total, all industries in EGR								
Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		3	4	6	7	8	9	11
New demand during year		3	4	4	4	4	4	4
New production during year		0	0	0	0	0	0	0
Net migration during year		2	2	2	2	2	2	2
Net change during year		1	1	1	1	1	1	1
Carryover to next year (+/-)	3	4	6	7	8	9	11	12
B. Middle projection:								
Total, all industries in EGR								
Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		7	11	16	21	26	31	35
New demand during year		7	7	7	7	7	7	7
New production during year		0	0	0	0	0	0	0
Net migration during year		2	2	2	2	2	2	2
Net change during year		5	5	5	5	5	5	5
Carryover to next year (+/-)	7	11	16	21	26	31	35	40
C. Upper projection:								
Total, all industries in EGR								
Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		10	18	27	35	44	52	61
New demand during year		10	11	11	11	11	11	11
New production during year		0	0	0	0	0	0	0
Net migration during year		2	2	2	2	2	2	2
Net change during year		8	9	8	8	8	8	8
Carryover to next year (+/-)	10	18	27	35	44	52	61	69

Notes:

(1) A positive (+) carryover indicates a "shortage" of workers in this occupation. A negative (-) carryover indicates the opposite.

(2) This worksheet allows for "ranges" of estimates and projections in recognition of the fact that these values cannot be known with certainty. The meanings of the words "Lower," "Middle," and "Upper" are as follows:

A. "Lower" means that your EGR thinks the probablity is no more than 25% that the true value lies below it.
B. "Middle" means that your EGR thinks the probability is about equal that the true value lies either below it or above it.
C. "Upper" means that your EGR thinks the probablity is no more than 25% that the true value lies above it.

Table 19: Shortage calculations - Production Workers (Other)

Worksheet for Calculating Shortages or Surpluses of One Occupation								
EGR Name:	Region 10							
Occupation Name:	Production Workers - Other							
Occupation SOC:	51-9199							
A. Lower projection:								
Total, all industries in EGR								
Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		49	57	65	70	75	80	85
New demand during year		8	8	5	5	5	5	5
New production during year		0	0	0	0	0	0	0
Net migration during year		0	0	0	0	0	0	0
Net change during year		8	8	5	5	5	5	5
Carryover to next year (+/-)	49	57	65	70	75	80	85	90
B. Middle projection:								
Total, all industries in EGR								
Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		97	118	139	149	159	169	179
New demand during year		21	21	10	10	10	10	10
New production during year		0	0	0	0	0	0	0
Net migration during year		0	0	0	0	0	0	0
Net change during year		21	21	10	10	10	10	10
Carryover to next year (+/-)	97	118	139	149	159	169	179	189
C. Upper projection:								
Total, all industries in EGR								
Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		120	152	183	198	213	228	243
New demand during year		32	32	15	15	15	15	15
New production during year		0	0	0	0	0	0	0
Net migration during year		0	0	0	0	0	0	0
Net change during year		32	32	15	15	15	15	15
Carryover to next year (+/-)	120	152	183	198	213	228	243	258

Notes:

(1) A positive (+) carryover indicates a "shortage" of workers in this occupation. A negative (-) carryover indicates the opposite.

(2) This worksheet allows for "ranges" of estimates and projections in recognition of the fact that these values cannot be known with certainty. The meanings of the words "Lower," "Middle," and "Upper" are as follows:

A. "Lower" means that your EGR thinks the probablity is no more than 25% that the true value lies below it.
B. "Middle" means that your EGR thinks the probability is about equal that the true value lies either below it or above it.
C. "Upper" means that your EGR thinks the probablity is no more than 25% that the true value lies above it.

Table 20: Shortage calculations - Truck Drivers, CDL (Heavy Tractor-Trailer)

Worksheet for Calculating Shortages or Surpluses of One Occupation								
EGR Name:	Region 10							
Occupation Name:	Truck Drivers - CDL (Heavy Tractor-Trailer)							
Occupation SOC:	53-3032							
A. Lower projection:								
Total, all industries in EGR								
Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		57	86	114	127	140	154	167
New demand during year		57	57	40	40	40	40	40
New production during year		0	0	0	0	0	0	0
Net migration during year		28	29	27	27	27	27	27
Net change during year		29	28	13	13	13	13	13
Carryover to next year (+/-)	57	86	114	127	140	154	167	180
B. Middle projection:								
Total, all industries in EGR								
Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		80	136	195	248	301	355	408
New demand during year		84	88	80	80	80	80	80
New production during year		0	0	0	0	0	0	0
Net migration during year		28	29	27	27	27	27	27
Net change during year		56	59	53	53	53	53	53
Carryover to next year (+/-)	80	136	195	248	301	355	408	461
C. Upper projection:								
Total, all industries in EGR								
Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		100	182	274	367	460	554	647
New demand during year		110	121	120	120	120	120	120
New production during year		0	0	0	0	0	0	0
Net migration during year		28	29	27	27	27	27	27
Net change during year		82	92	93	93	93	93	93
Carryover to next year (+/-)	100	182	274	367	460	554	647	740

Notes:

(1) A positive (+) carryover indicates a "shortage" of workers in this occupation. A negative (-) carryover indicates the opposite.

(2) This worksheet allows for "ranges" of estimates and projections in recognition of the fact that these values cannot be known with certainty. The meanings of the words "Lower," "Middle," and "Upper" are as follows:

A. "Lower" means that your EGR thinks the probablity is no more than 25% that the true value lies below it.
B. "Middle" means that your EGR thinks the probability is about equal that the true value lies either below it or above it.
C. "Upper" means that your EGR thinks the probablity is no more than 25% that the true value lies above it.

Table 21: Shortage calculations - Packaging & Filling Machine Operators

Worksheet for Calculating Shortages or Surpluses of One Occupation								
EGR Name:	Region 10							
Occupation Name:	Packaging & Filling Machine Operators							
Occupation SOC:	51-9111							
A. Lower projection:								
Total, all industries in EGR								
Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		6	7	9	11	13	14	16
New demand during year		6	6	5	5	5	5	5
New production during year		0	0	0	0	0	0	0
Net migration during year		4	4	3	3	3	3	3
Net change during year		2	2	2	2	2	2	2
Carryover to next year (+/-)	6	7	9	11	13	14	16	18
B. Middle projection:								
Total, all industries in EGR								
Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		11	19	27	33	40	47	53
New demand during year		12	12	10	10	10	10	10
New production during year		0	0	0	0	0	0	0
Net migration during year		4	4	3	3	3	3	3
Net change during year		8	8	7	7	7	7	7
Carryover to next year (+/-)	11	19	27	33	40	47	53	60
C. Upper projection:								
Total, all industries in EGR								
Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		17	30	45	56	68	80	91
New demand during year		17	19	15	15	15	15	15
New production during year		0	0	0	0	0	0	0
Net migration during year		4	4	3	3	3	3	3
Net change during year		14	14	12	12	12	12	12
Carryover to next year (+/-)	17	30	45	56	68	80	91	103

Notes:

(1) A positive (+) carryover indicates a "shortage" of workers in this occupation. A negative (-) carryover indicates the opposite.

(2) This worksheet allows for "ranges" of estimates and projections in recognition of the fact that these values cannot be known with certainty. The meanings of the words "Lower," "Middle," and "Upper" are as follows:

A. "Lower" means that your EGR thinks the probablity is no more than 25% that the true value lies below it.
B. "Middle" means that your EGR thinks the probability is about equal that the true value lies either below it or above it.
C. "Upper" means that your EGR thinks the probablity is no more than 25% that the true value lies above it.

Table 22: Shortage calculations - Inspectors, Testers, & Samplers

Worksheet for Calculating Shortages or Surpluses of One Occupation

EGR Name:	Region 10
Occupation Name:	Inspectors, Testers, Samplers
Occupation SOC:	51-9061

A. Lower projection:

Total, all industries in EGR

Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		10	9	8	2	-4	-10	-16
New demand during year		10	10	5	5	5	5	5
New production during year		15	15	15	15	15	15	15
Net migration during year		-4	-4	-4	-4	-4	-4	-4
Net change during year		-1	-1	-6	-6	-6	-6	-6
Carryover to next year (+/-)	10	9	8	2	-4	-10	-16	-21

B. Middle projection:

Total, all industries in EGR

Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		20	29	39	38	37	37	36
New demand during year		20	21	10	10	10	10	10
New production during year		15	15	15	15	15	15	15
Net migration during year		-4	-4	-4	-4	-4	-4	-4
Net change during year		9	10	-1	-1	-1	-1	-1
Carryover to next year (+/-)	20	29	39	38	37	37	36	35

C. Upper projection:

Total, all industries in EGR

Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		30	49	70	74	78	82	87
New demand during year		31	32	15	15	15	15	15
New production during year		15	15	15	15	15	15	15
Net migration during year		-4	-4	-4	-4	-4	-4	-4
Net change during year		20	21	4	4	4	4	4
Carryover to next year (+/-)	30	49	70	74	78	82	87	91

Notes:

(1) A positive (+) carryover indicates a "shortage" of workers in this occupation. A negative (-) carryover indicates the opposite.

(2) This worksheet allows for "ranges" of estimates and projections in recognition of the fact that these values cannot be known with certainty. The meanings of the words "Lower," "Middle," and "Upper" are as follows:

A. "Lower" means that your EGR thinks the probablity is no more than 25% that the true value lies below it.

B. "Middle" means that your EGR thinks the probability is about equal that the true value lies either below it or above it.

C. "Upper" means that your EGR thinks the probablity is no more than 25% that the true value lies above it.

Table 23: Shortage calculations - Machinists (Metal & Plastic)

Worksheet for Calculating Shortages or Surpluses of One Occupation

EGR Name:	Region 10
Occupation Name:	Machinists (metal & Plastic)
Occupation SOC:	51-4041

A. Lower projection:

Total, all industries in EGR

Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		12	16	19	21	23	24	26
New demand during year		12	12	5	5	5	5	5
New production during year		0	0	0	0	0	0	0
Net migration during year		8	9	3	3	3	3	3
Net change during year		4	4	2	2	2	2	2
Carryover to next year (+/-)	12	16	19	21	23	24	26	28

B. Middle projection:

Total, all industries in EGR

Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		24	41	58	65	71	78	85
New demand during year		25	26	10	10	10	10	10
New production during year		0	0	0	0	0	0	0
Net migration during year		8	9	3	3	3	3	3
Net change during year		17	17	7	7	7	7	7
Carryover to next year (+/-)	24	41	58	65	71	78	85	91

C. Upper projection:

Total, all industries in EGR

Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		36	66	99	110	122	134	145
New demand during year		38	41	15	15	15	15	15
New production during year		0	0	0	0	0	0	0
Net migration during year		8	9	3	3	3	3	3
Net change during year		30	32	12	12	12	12	12
Carryover to next year (+/-)	36	66	99	110	122	134	145	157

Notes:

(1) A positive (+) carryover indicates a "shortage" of workers in this occupation. A negative (-) carryover indicates the opposite.

(2) This worksheet allows for "ranges" of estimates and projections in recognition of the fact that these values cannot be known with certainty. The meanings of the words "Lower," "Middle," and "Upper" are as follows:

A. "Lower" means that your EGR thinks the probablity is no more than 25% that the true value lies below it.

B. "Middle" means that your EGR thinks the probability is about equal that the true value lies either below it or above it.

C. "Upper" means that your EGR thinks the probablity is no more than 25% that the true value lies above it.

Table 24: Shortage calculations - Industrial Maintenance Technicians

Worksheet for Calculating Shortages or Surpluses of One Occupation								
EGR Name:	Region 10							
Occupation Name:	Industrial Maintenance Technicians							
Occupation SOC:	49-9041							
A. Lower projection:								
Total, all industries in EGR								
Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		13	13	12	4	-5	-14	-22
New demand during year		13	13	5	5	5	5	5
New production during year		15	15	15	15	15	15	15
Net migration during year		-2	-2	-2	-2	-2	-2	-2
Net change during year		-1	-1	-9	-9	-9	-9	-9
Carryover to next year (+/-)	13	13	12	4	-5	-14	-22	-31
B. Middle projection:								
Total, all industries in EGR								
Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		26	39	53	49	46	42	39
New demand during year		27	27	10	10	10	10	10
New production during year		15	15	15	15	15	15	15
Net migration during year		-2	-2	-2	-2	-2	-2	-2
Net change during year		13	14	-4	-4	-4	-4	-4
Carryover to next year (+/-)	26	39	53	49	46	42	39	35
C. Upper projection:								
Total, all industries in EGR								
Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		39	65	92	94	95	97	98
New demand during year		40	41	15	15	15	15	15
New production during year		15	15	15	15	15	15	15
Net migration during year		-2	-2	-2	-2	-2	-2	-2
Net change during year		26	27	2	2	2	2	2
Carryover to next year (+/-)	39	65	92	94	95	97	98	100

Notes:

(1) A positive (+) carryover indicates a "shortage" of workers in this occupation. A negative (-) carryover indicates the opposite.

(2) This worksheet allows for "ranges" of estimates and projections in recognition of the fact that these values cannot be known with certainty. The meanings of the words "Lower," "Middle," and "Upper" are as follows:

A. "Lower" means that your EGR thinks the probablity is no more than 25% that the true value lies below it.
B. "Middle" means that your EGR thinks the probability is about equal that the true value lies either below it or above it.
C. "Upper" means that your EGR thinks the probablity is no more than 25% that the true value lies above it.

Table 25: Shortage calculations - Welders, Cutters, Solderers, & Brazers

Worksheet for Calculating Shortages or Surpluses of One Occupation

EGR Name:	Region 10
Occupation Name:	Welders, Cutters, Solderers, & Brazers
Occupation SOC:	51-4121

A. Lower projection:

Total, all industries in EGR

Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		7	10	13	14	16	17	18
New demand during year		7	7	5	5	5	5	5
New production during year		11	11	11	11	11	11	11
Net migration during year		-7	-7	-7	-7	-7	-7	-7
Net change during year		3	3	1	1	1	1	1
Carryover to next year (+/-)	7	10	13	14	16	17	18	19

B. Middle projection:

Total, all industries in EGR

Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		14	26	39	45	51	57	63
New demand during year		16	17	10	10	10	10	10
New production during year		11	11	11	11	11	11	11
Net migration during year		-7	-7	-7	-7	-7	-7	-7
Net change during year		12	13	6	6	6	6	6
Carryover to next year (+/-)	14	26	39	45	51	57	63	70

C. Upper projection:

Total, all industries in EGR

Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		21	42	66	77	88	99	110
New demand during year		25	27	15	15	15	15	15
New production during year		11	11	11	11	11	11	11
Net migration during year		-7	-7	-7	-7	-7	-7	-7
Net change during year		21	23	11	11	11	11	11
Carryover to next year (+/-)	21	42	66	77	88	99	110	121

Notes:

(1) A positive (+) carryover indicates a "shortage" of workers in this occupation. A negative (-) carryover indicates the opposite.

(2) This worksheet allows for "ranges" of estimates and projections in recognition of the fact that these values cannot be known with certainty. The meanings of the words "Lower," "Middle," and "Upper" are as follows:

A. "Lower" means that your EGR thinks the probablity is no more than 25% that the true value lies below it.

B. "Middle" means that your EGR thinks the probability is about equal that the true value lies either below it or above it.

C. "Upper" means that your EGR thinks the probablity is no more than 25% that the true value lies above it.

Table 26: Shortage calculations - Computer Techs (Hardware & Software Support)

Worksheet for Calculating Shortages or Surpluses of One Occupation

EGR Name:	Region 10
Occupation Name:	Computer Technicians (support specialists)
Occupation SOC:	15-1041

A. Lower projection:

Total, all industries in EGR

Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		4	-1	-6	-11	-16	-21	-26
New demand during year		4	4	5	5	5	5	5
New production during year		12	12	12	12	12	12	12
Net migration during year		-2	-2	-2	-2	-2	-2	-2
Net change during year		-5	-5	-5	-5	-5	-5	-5
Carryover to next year (+/-)	4	-1	-6	-11	-16	-21	-26	-31

B. Middle projection:

Total, all industries in EGR

Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		9	8	8	8	8	8	8
New demand during year		9	9	10	10	10	10	10
New production during year		12	12	12	12	12	12	12
Net migration during year		-2	-2	-2	-2	-2	-2	-2
Net change during year		-1	-1	0	0	0	0	0
Carryover to next year (+/-)	9	8	8	8	8	8	8	8

C. Upper projection:

Total, all industries in EGR

Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		13	17	22	27	32	37	43
New demand during year		14	15	15	15	15	15	15
New production during year		12	12	12	12	12	12	12
Net migration during year		-2	-2	-2	-2	-2	-2	-2
Net change during year		4	5	5	5	5	5	5
Carryover to next year (+/-)	13	17	22	27	32	37	43	48

Notes:

(1) A positive (+) carryover indicates a "shortage" of workers in this occupation. A negative (-) carryover indicates the opposite.

(2) This worksheet allows for "ranges" of estimates and projections in recognition of the fact that these values cannot be known with certainty. The meanings of the words "Lower," "Middle," and "Upper" are as follows:

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B. "Middle" means that your EGR thinks the probability is about equal that the true value lies either below it or above it.

C. "Upper" means that your EGR thinks the probablity is no more than 25% that the true value lies above it.

Table 27: Shortage calculations - Industrial Engineering Techs

Worksheet for Calculating Shortages or Surpluses of One Occupation

EGR Name:	Region 10
Occupation Name:	Industrial Engineering Techs
Occupation SOC:	17-3026

A. Lower projection:

Total, all industries in EGR

Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		3	-2	-8	-15	-22	-29	-36
New demand during year		3	3	2	2	2	2	2
New production during year		10	10	10	10	10	10	10
Net migration during year		-2	-2	-2	-2	-2	-2	-2
Net change during year		-5	-5	-7	-7	-7	-7	-7
Carryover to next year (+/-)	3	-2	-8	-15	-22	-29	-36	-43

B. Middle projection:

Total, all industries in EGR

Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		6	4	1	-4	-9	-15	-20
New demand during year		6	6	3	3	3	3	3
New production during year		10	10	10	10	10	10	10
Net migration during year		-2	-2	-2	-2	-2	-2	-2
Net change during year		-2	-2	-5	-5	-5	-5	-5
Carryover to next year (+/-)	6	4	1	-4	-9	-15	-20	-26

C. Upper projection:

Total, all industries in EGR

Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		9	10	11	7	3	-1	-5
New demand during year		9	10	5	5	5	5	5
New production during year		10	10	10	10	10	10	10
Net migration during year		-2	-2	-2	-2	-2	-2	-2
Net change during year		1	1	-4	-4	-4	-4	-4
Carryover to next year (+/-)	9	10	11	7	3	-1	-5	-8

Notes:

(1) A positive (+) carryover indicates a "shortage" of workers in this occupation. A negative (-) carryover indicates the opposite.

(2) This worksheet allows for "ranges" of estimates and projections in recognition of the fact that these values cannot be known with certainty. The meanings of the words "Lower," "Middle," and "Upper" are as follows:

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B. "Middle" means that your EGR thinks the probability is about equal that the true value lies either below it or above it.

C. "Upper" means that your EGR thinks the probablity is no more than 25% that the true value lies above it.

Table 28: Shortage calculations - First-Line Supervisors/Managers of Production & Operating Workers

Worksheet for Calculating Shortages or Surpluses of One Occupation

EGR Name:	Region 10
Occupation Name:	First-Line Supervisors/Managers of Production & Operating Workers
Occupation SOC:	51-1011

A. Lower projection:

Total, all industries in EGR

Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		3	8	13	20	27	34	41
New demand during year		3	3	5	5	5	5	5
New production during year		4	4	4	4	4	4	4
Net migration during year		-6	-6	-6	-6	-6	-6	-6
Net change during year		5	5	7	7	7	7	7
Carryover to next year (+/-)	3	8	13	20	27	34	41	48

B. Middle projection:

Total, all industries in EGR

Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		10	22	35	47	59	71	83
New demand during year		10	10	10	10	10	10	10
New production during year		4	4	4	4	4	4	4
Net migration during year		-6	-6	-6	-6	-6	-6	-6
Net change during year		12	12	12	12	12	12	12
Carryover to next year (+/-)	10	22	35	47	59	71	83	95

C. Upper projection:

Total, all industries in EGR

Year	2005	2006	2007	2008	2009	2010	2011	2012
Carryover from last year (+/-)		15	32	50	67	84	101	118
New demand during year		15	16	15	15	15	15	15
New production during year		4	4	4	4	4	4	4
Net migration during year		-6	-6	-6	-6	-6	-6	-6
Net change during year		17	18	17	17	17	17	17
Carryover to next year (+/-)	15	32	50	67	84	101	118	135

Notes:

(1) A positive (+) carryover indicates a "shortage" of workers in this occupation. A negative (-) carryover indicates the opposite.

(2) This worksheet allows for "ranges" of estimates and projections in recognition of the fact that these values cannot be known with certainty. The meanings of the words "Lower," "Middle," and "Upper" are as follows:

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B. "Middle" means that your EGR thinks the probability is about equal that the true value lies either below it or above it.

C. "Upper" means that your EGR thinks the probablity is no more than 25% that the true value lies above it.

Section V: Location and Significance of Critical Skills Gaps

Results from the online survey conducted with 70+ employers representing the sectors of health care, manufacturing and logistics, indicated the following regarding critical skills gaps. Skills sets identified by the manufacturing/logistics respondents that were both critical and in shortage were as follows:

- Computer/Technology
- Supervisory Skills
- Employability Skills
- Mathematics/Measurements

Skills sets identified by the health care respondents that were both critical and in shortage were as follows:

- Employability Skills
- Oral Communication Skills (Including Second Language Proficiency)
- Supervisory Skills
- Teamwork

During the employer focus group held on October 25, 2005, critical skills information was collected from participating employers. When employers came back together as a large group, the Work Team engaged participants in an activity to identify the Top 5 skills sets needed relative to importance in the workplace and the Top 5 skills sets that were in shortage in both applicants and incumbent workers. Participants worked in small groups and then reported their findings to their peers. The list of skills from which employers could choose to form their rankings, which was developed from consultation with research sources including O*Net and WorkKeys, was as follows:

- Working in Teams
- Using Technology and Information Systems
- Math Skills
- Reading Skills

- Learning, Understanding and Applying Information
- Developing Positive Attitude toward Change
- Communicating Effectively in English
- Thinking Critically to Solve Problems
- Reading and Using Technical Documents & Diagrams
- Employability Skills (Attendance, Timeliness, etc.)
- Installation, Maintenance, & Repair
- Quality Control/Continuous Improvement
- Supervisory Skills
- Ability to Effectively Listen

All employers reported that the following skills sets were most important in the workplace:

- Employability Skills (Attendance, Timeliness, etc.)
- Using Technology and Information Systems
- Math Skills
- Thinking Critically to Solve Problems
- Quality Control/Continuous Improvement

Health Care employers marked two other skills sets as very important that were different from the collective ranking:

- Supervisory Skills
- Ability to Effectively Listen

When asked to identify the skills sets that were currently in shortage in both applicants and incumbent workers, employers named the following list:

- Using Technology and Information Systems
- Math Skills (#1 skills deficiency listed for EGR 10 in ERISS)
- Employability Skills (Attendance, Timeliness, etc.)
- Learning, Understanding & Applying Information
- Developing Positive Attitude Toward Change
- Thinking Critically to Solve Problems
- Reading & Using Technical Documents & Diagrams
- Ability to Effectively Listen

It is compelling to note that employers identified 60% + of skills in shortage as those they deemed to be most important for an efficient, profitable workforce. This anecdotal information

is consistent with the results from the ERISS survey of employers conducted by the IDWD in conjunction with this project. It is also noteworthy that skills gaps were consistent across both industry sectors. Employers clearly voiced a need for workers who come to the job site with a strong set of basic aptitudes which may then be expanded in whatever clinical and/or technical direction is necessary for a particular task.

If skills gaps are not ameliorated to make available a more capable workforce, employers made the following predictions regarding the status of economic development in the region:

- If the employee base does not increase its technical prowess, more and more business will revert to China. There are still specialized tasks that the US retains proficiency over the global market to perform; will lose competitive advantage if technological skills are not improved.
- The trained, skilled workforce is aging; must take steps now to replace said expertise.
- Engineers are not affordable; companies must look globally to find shop floor process engineers.
- Overtime paid to accommodate occupation shortages not only increases overall product price; also pulls management onto floor and reduces office productivity and quality control capacity.
- Business will leave Indiana and either go overseas or another state in which workforce is better prepared to meet companies' needs.
- To accommodate shortage of workers, companies have developed alliances with trustworthy competitors and share work flow as needed.
- US manufacturing will continue to develop its capacity to produce niche products – low volume, high return, with the need to always be flexible and accommodate the customers' needs – this takes a skilled workforce!
- Low and/or unrealistic work ethic contributes to occupation shortages – companies are reaching out to prospective employees in high school through mentoring programs designed to inform students about the realities of work life.

Section VI: Regional Consortium and Industry Partner Engagement

This section outlines the efforts made to ensure that this process incorporated regional stakeholders from key industries. All of Region 10's various stakeholders were provided with opportunities to give input towards selection of key industries and identification of key occupations and skill sets. The methods used to promote regional involvement are outlined below.

Development of Consortium List

In order to build a representative consortium of employers representing the health care, manufacturing and logistics sectors, a number of existing lists were reviewed and companies were culled from said lists to for the Consortium List. Existing lists reviewed included the following:

- Southern Indiana Chamber of Commerce Directory
- Southern Indiana Economic Development Council Directories
- ERISS Survey List
- Scott County Economic Development Corporation Listings
- Washington County Economic Growth Partnership Listings
- Harrison County Chamber of Commerce Listings
- Crawford County Economic Development Council Listings
- WorkOne Southern 7 Top 100 Listing & Satisfaction Survey Mail List

Companies included on the Consortium List were balanced, as closely as possible, to ensure ample representation from all sectors across all counties in EGR 10. Additionally, special attention was given to include those companies who had expressed interest and/or had participated in WorkOne and Southern 7 projects in the past, to ensure that those employers already engaged in workforce development activities could serve as the core for further development of workforce partners in this initiative.

Participation of Core Team

Key participants in the SSI process have included members of our Core Team, which is comprised by industry sector representatives, higher education representatives, and economic development professionals from the counties represented in EGR 10. The Core Team was integral in determining the initial course of this project at our Industry Sector Selection Workshop, held on September 13, 2005 (See Appendix C for list of key industry employers). Additionally, the members have assisted in the identification of key employers to be included in this project. They have been involved in all aspects of Phase 1 project development and were well represented at our Phase 1 "Findings" meeting on October 31, 2005, as represented by the number of signatories included on the Report Cover Sheet.

Introductory Interviews

After introductory letters were disseminated to all consortium employers, telephone interviews were attempted to reiterate the importance of this initiative and to encourage employers to become involved from the project's inception. Emphasis was placed during the interview on the fact that solutions derived from the project development process were to be demand-driven and applicable to employers' specific needs. A telephone script was designed and used by those individuals conducting the telephone interviews to ensure consistency of message and professional delivery. The staff of the Ivy Tech Office of Corporate and Continuing Education was engaged to perform the interviews.

Employer Updates

Periodic updates were sent to employers and key players, either via e-mail or US mail to ensure that all participants were kept abreast of the project's progress and upcoming opportunities for employer engagement. An example of such an update is attached.

Occupation and Skills Gaps Survey using Survey Monkey

A brief survey was designed to further glean information from employers regarding their perceptions of occupation and skills gaps in the Health Care and Manufacturing/Logistics industries. Information from the research performed to both identify sectors to study and further identify occupation and skills gaps empirically was incorporated into the construction of survey questions.

Using Survey Monkey, a basic online survey design and distribution tool, the Work Team developed an instrument that directed the employer's survey experience depending upon their industry sector. The two tracks in survey design mirrored each other to provide consistency among survey respondents' experience. For those employers and key contacts whose e-mail address was available, surveys were distributed via Survey Monkey with an explanatory cover letter and the Southern 7 Workforce Investment e-mail as the identifying element to encourage participation.

Collaboration with Greater Louisville, Inc.

GLI brings substantial resources to this project and is a natural partner for EGR 10 as we evaluate the workforce needs not only for our region, but for the labor shed in which we reside. GLI has already been focusing on a strategic skills strategy on the KY side of the river, it's just called Business Networks instead. This is a demand driven strategy where businesses lead from the planning to the implementation of sector strategies. The networks and their composition vary over time - they change over time to reflect the economy. Currently GLI has 9 networks: Health, IT, Logistics, Manufacturing, Customer Contact Centers, Agribusiness, Arts & Cultural Attractions, CIO Roundtable, and the Hire Education Forum which consists of post-secondary institutions.

Since 1999, approximately $1million per year has been spent on attraction, expansion and business network activities for the 24 county regional area - this includes Southern Indiana. Southern Indiana businesses are already taking advantage of these resources since it does not matter to them as to where the political jurisdictions begin or end. Instead of duplicating efforts on both sides of the river, we are exploring the opportunity to embrace our interdependence upon each other for the betterment of employers in EGR 10 and beyond. The partnership that we are exploring will unify our approach to workforce initiatives so that we may market to the region's businesses with one voice, one solution and multiple funding streams.

Focus Group #1 re: Occupation and Skills Gaps

Employers met at Indiana University Southeast on Tuesday, October 25, 2005 from 9-11 a.m. to discuss the issues pertinent to the identification of Occupation and Skills Gaps in EGR 10. After introductions and a brief synopsis of the research that led to the selection of the industries included in this project, the employers split into two groups – one for Health Care employers and one for Manufacturing/Logistics employers. Each group had its own facilitator and used the same questions to discuss the gaps in certain critical occupations that their industry was experiencing. Questions asked were as follows:

9. Tell me about current and future trends in your industry.
10. What are the greatest challenges that your industry is experiencing?
11. What do you perceive are critical occupations, both now and in the future?
12. Where do the employees come from who fill these critical occupations?
13. What shortages are you experiencing now in these critical occupations?
14. Describe the impact of said shortages, i.e. loss in production, number of days understaffed, etc. (ref. chart re: time to fill positions)
15. What occupation shortages do you perceive for the future?
16. Why do you think this is happening?

When employers came back together as a large group, the Work Team engaged participants in an activity to identify the Top 5 skills sets needed relative to importance in the

workplace and the Top 5 skills sets that were in shortage in both applicants and incumbent workers. Participants worked in small groups and then reported their findings to their peers. The list of skills from which employers could choose to form their rankings, which was developed from consultation with research sources including O*Net and WorkKeys, was as follows:

- Working in Teams
- Using Technology and Information Systems
- Math Skills
- Reading Skills
- Learning, Understanding and Applying Information
- Developing Positive Attitude toward Change
- Communicating Effectively in English
- Thinking Critically to Solve Problems
- Reading and Using Technical Documents & Diagrams
- Employability Skills (Attendance, Timeliness, etc.)
- Installation, Maintenance, & Repair
- Quality Control/Continuous Improvement
- Supervisory Skills
- Ability to Effectively Listen

APPENDIX A – EMPLOYMENT & WAGES DATA

Table A 1: Region 10 Top 25 Industry Concentrations, 3 Digit NAICS

Region 10 Top 25 Industry Concentrations					
		Employment	Share of	Growth 2001 - 2004	
NAICS	Industry	2004	Total 2004	New Jobs	% Growth
722	Food Services and Drinking Places	7,830	7.8%	528	7.2%
611	Educational Services	7,682	7.7%	638	9.1%
622	Hospitals	4,137	4.1%	400	10.7%
561	Administrative and Support Services	4,044	4.0%	585	16.9%
238	Specialty Trade Contractors	3,462	3.5%	69	2.0%
452	General Merchandise Stores	3,403	3.4%	141	4.3%
621	Ambulatory Health Care Services	3,267	3.3%	236	7.8%
336	Transportation Equipment Manufacturing	3,160	3.2%	-129	-3.9%
484	Truck Transportation	3,032	3.0%	38	1.3%
713	Amusement, Gambling, and Recreation Industries	2,713	2.7%	-51	-1.8%
623	Nursing and Residential Care Facilities	2,640	2.6%	50	1.9%
445	Food and Beverage Stores	2,636	2.6%	-252	-8.7%
921	Executive, Legislative, and Other General Government Support	2,626	2.6%	-47	-1.7%
337	Furniture and Related Product Manufacturing	2,392	2.4%	-718	-23.1%
326	Plastics and Rubber Products Manufacturing	2,335	2.3%	-109	-4.5%
321	Wood Product Manufacturing	2,165	2.2%	88	4.2%
311	Food Manufacturing	2,053	2.1%	-160	-7.2%
441	Motor Vehicle and Parts Dealers	1,996	2.0%	24	1.2%
541	Professional, Scientific, and Technical Services	1,955	2.0%	-16	-0.8%
423	Merchant Wholesalers, Durable Goods	1,839	1.8%	137	8.1%
522	Credit Intermediation and Related Activities	1,816	1.8%	183	11.2%
926	Administration of Economic Programs	1,674	1.7%	-1,178	-41.3%
333	Machinery Manufacturing	1,671	1.7%	-215	-11.4%
332	Fabricated Metal Product Manufacturing	1,576	1.6%	-412	-20.7%
323	Printing and Related Support Activities	1,484	1.5%	-119	-7.4%
	All Other Industry	22,400	22.4%	171	0.8%
	Total Employment	99,970			

Source: Indiana Department of Workforce Development, U.S. Bureau of Labor Statistics, Covered Employment and Wages (CEW).

Table A 2: Major Industry (2 Digit NAICS) Average Annual Salary - Sorted by Wage

Major Industry (2-Digit NAICS) Average Annual Salary Sorted by 2004 Wage					
NAICS	Industry	Avg. Annual Wage 2004	Avg. Annual Wage 2001	Change	% Change
22	Utilities	$ 50,575	$ 46,580	$ 3,995	8.6%
55	Management of Companies and Enterprises	$ 47,983	N/A	N/A	N/A
52	Finance and Insurance	$ 38,771	$ 33,487	$ 5,284	15.8%
31-33	Manufacturing	$ 36,896	$ 32,703	$ 4,193	12.8%
21	Mining	$ 36,849	$ 34,945	$ 1,904	5.4%
42	Wholesale Trade	$ 36,568	$ 30,438	$ 6,130	20.1%
48-49	Transportation and Warehousing	$ 35,750	$ 34,167	$ 1,583	4.6%
54	Professional, Scientific, and Technical Services	$ 32,778	$ 33,780	$ (1,002)	-3.0%
62	Health Care and Social Services	$ 32,359	$ 28,800	$ 3,559	12.4%
23	Construction	$ 32,341	$ 31,177	$ 1,164	3.7%
61	Educational Services	$ 30,910	$ 30,194	$ 716	2.4%
92	Public Administration	$ 30,809	$ 26,576	$ 4,233	15.9%
51	Information	$ 26,985	$ 25,562	$ 1,423	5.6%
71	Arts, Entertainment, and Recreation	$ 25,864	$ 23,058	$ 2,806	12.2%
53	Real Estate and Rental and Leasing	$ 22,654	$ 20,823	$ 1,831	8.8%
44-45	Retail Trade	$ 20,527	$ 18,629	$ 1,898	10.2%
56	Administrative and Support and Waste Management and Remediation Services	$ 20,424	$ 18,978	$ 1,446	7.6%
81	Other Services(Except Public Administration)	$ 20,075	$ 18,547	$ 1,528	8.2%
11	Agriculture, Forestry, Fishing and Hunting	$ 18,986	N/A	N/A	N/A
72	Accommodation and Food Services	$ 11,020	$ 10,257	$ 763	7.4%
	All Industries - Region 10	*$ 29,232*	*$ 26,759*	*$ 2,473*	*9.2%*

N/A = This item is not available. This is due to non-disclosure requirements, or because a calculation could not be created.

Data sources: Indiana Business Research Center based on ES202 data, U.S. Bureau of Labor Statistics

Table A 3: Major Industry Average Annual Salary - Sorted by Wage Growth

Major Industry (2-Digit NAICS) Average Annual Salary Sorted by Wage Growth, 2001 - 2004					
NAICS	Industry	Avg. Annual Wage 2004	Avg. Annual Wage 2001	Change	% Change
42	Wholesale Trade	$ 36,568	$ 30,438	$ 6,130	20.1%
92	Public Administration	$ 30,809	$ 26,576	$ 4,233	15.9%
52	Finance and Insurance	$ 38,771	$ 33,487	$ 5,284	15.8%
31-33	Manufacturing	$ 36,896	$ 32,703	$ 4,193	12.8%
62	Health Care and Social Services	$ 32,359	$ 28,800	$ 3,559	12.4%
71	Arts, Entertainment, and Recreation	$ 25,864	$ 23,058	$ 2,806	12.2%
44-45	Retail Trade	$ 20,527	$ 18,629	$ 1,898	10.2%
53	Real Estate and Rental and Leasing	$ 22,654	$ 20,823	$ 1,831	8.8%
22	Utilities	$ 50,575	$ 46,580	$ 3,995	8.6%
81	Other Services(Except Public Administration)	$ 20,075	$ 18,547	$ 1,528	8.2%
56	Administrative and Support and Waste Management and Remediation Services	$ 20,424	$ 18,978	$ 1,446	7.6%
72	Accommodation and Food Services	$ 11,020	$ 10,257	$ 763	7.4%
51	Information	$ 26,985	$ 25,562	$ 1,423	5.6%
21	Mining	$ 36,849	$ 34,945	$ 1,904	5.4%
48-49	Transportation and Warehousing	$ 35,750	$ 34,167	$ 1,583	4.6%
23	Construction	$ 32,341	$ 31,177	$ 1,164	3.7%
61	Educational Services	$ 30,910	$ 30,194	$ 716	2.4%
54	Professional, Scientific, and Technical Services	$ 32,778	$ 33,780	$ (1,002)	-3.0%
55	Management of Companies and Enterprises	$ 47,983	N/A	N/A	N/A
11	Agriculture, Forestry, Fishing and Hunting	$ 18,986	N/A	N/A	N/A
	Average - All Firms	*$ 29,232*	*$ 26,759*	*$ 2,473*	*9.2%*

N/A = This item is not available. This is due to non-disclosure requirements, or because a calculation could not be created.
Data sources: Indiana Business Research Center based on ES202 data, U.S. Bureau of Labor Statistics

Table A 4: Industry (3-Digit NAICS) Average Annual Salary - Sorted by Wage

Industry (3-Digit NAICS) Average Annual Salary Sorted by 2004 Wage				
NAICS	Industry	Avg. Annual Wage 2004	Avg. Annual Wage 2001	% Change
525	Funds, Trusts, and Other Financial Vehicles	$ 109,809	$ 72,378	51.7%
523	Securities, Commodity Contracts, and Other Financial Investments and Related Activities	$ 71,765	$ 85,458	-16.0%
325	Chemical Manufacturing	$ 60,604	$ 53,041	14.3%
221	Utilities	$ 50,575	$ 46,580	8.6%
334	Computer and Electronic Product Manufacturing	$ 50,106	$ 50,445	-0.7%
928	National Security and International Affairs	$ 49,294	$ 38,818	27.0%
517	Telecommunications	$ 48,856	$ 41,532	17.6%
551	Management of Companies and Enterprises	$ 47,983	N/A	N/A
925	Administration of Housing Programs, Urban Planning, and Community Development	$ 47,429	$ 31,140	52.3%
621	Ambulatory Health Care Services	$ 44,174	$ 38,678	14.2%
237	Heavy and Civil Engineering Construction	$ 44,009	$ 41,053	7.2%
331	Primary Metal Manufacturing	$ 42,653	$ 36,876	15.7%
327	Nonmetallic Mineral Product Manufacturing	$ 41,740	$ 34,237	21.9%
491	Postal Service	$ 41,604	$ 36,716	13.3%
424	Merchant Wholesalers, Nondurable Goods	$ 40,782	$ 30,018	35.9%
524	Insurance Carriers and Related Activities	$ 39,606	$ 33,653	17.7%
311	Food Manufacturing	$ 39,410	$ 33,893	16.3%
322	Paper Manufacturing	$ 38,158	$ 31,621	20.7%
336	Transportation Equipment Manufacturing	$ 37,474	$ 35,416	5.8%
333	Machinery Manufacturing	$ 36,946	$ 33,525	10.2%
212	Mining (except Oil and Gas)	$ 36,837	N/A	N/A
332	Fabricated Metal Product Manufacturing	$ 36,087	$ 33,187	8.7%
323	Printing and Related Support Activities	$ 35,753	$ 33,508	6.7%
423	Merchant Wholesalers, Durable Goods	$ 35,505	$ 31,265	13.6%
522	Credit Intermediation and Related Activities	$ 35,312	$ 30,419	16.1%
926	Administration of Economic Programs	$ 34,737	$ 27,701	25.4%
922	Justice, Public Order, and Safety Activities	$ 34,641	$ 32,746	5.8%
337	Furniture and Related Product Manufacturing	$ 34,302	$ 27,962	22.7%
484	Truck Transportation	$ 34,266	$ 31,366	9.2%
425	Wholesale Electronic Markets and Agents and Brokers	$ 32,798	$ 26,431	24.1%
541	Professional, Scientific, and Technical Services	$ 32,778	$ 33,780	-3.0%
441	Motor Vehicle and Parts Dealers	$ 32,723	$ 30,060	8.9%
339	Miscellaneous Manufacturing	$ 32,630	$ 28,147	15.9%
622	Hospitals	$ 32,563	$ 28,678	13.5%
326	Plastics and Rubber Products Manufacturing	$ 32,466	$ 28,298	14.7%
923	Administration of Human Resource Programs	$ 31,810	$ 30,084	5.7%
611	Educational Services	$ 30,910	$ 30,194	2.4%
488	Support Activities for Transportation	$ 30,343	$ 28,293	7.2%
321	Wood Product Manufacturing	$ 30,246	$ 27,646	9.4%
236	Construction of Buildings	$ 30,000	$ 29,589	1.4%
238	Specialty Trade Contractors	$ 29,804	$ 28,951	2.9%

Continued.

Industry (3-Digit NAICS) Average Annual Salary Sorted by 2004 Wage (Continued)				
NAICS	Industry	Avg. Annual Wage 2004	Avg. Annual Wage 2001	% Change
562	Waste Management and Remediation Services	$ 29,502	$ 27,050	9.1%
921	Executive, Legislative, and Other General Government Support	$ 28,116	$ 24,722	13.7%
492	Couriers and Messengers	$ 27,130	$ 25,898	4.8%
811	Repair and Maintenance	$ 26,816	$ 22,878	17.2%
446	Health and Personal Care Stores	$ 26,527	$ 22,302	18.9%
444	Building Material and Garden Equipment and Supplies Dealers	$ 25,785	$ 25,934	-0.6%
924	Administration of Environmental Quality Programs	$ 25,064	$ 21,321	17.6%
623	Nursing and Residential Care Facilities	$ 24,564	$ 22,781	7.8%
493	Warehousing and Storage	$ 24,282	$ 17,154	41.6%
335	Electrical Equipment, Appliance, and Component Manufacturing	$ 24,233	$ 24,641	-1.7%
531	Real Estate	$ 23,792	$ 20,200	17.8%
511	Publishing Industries (except Internet)	$ 23,640	$ 24,848	-4.9%
442	Furniture and Home Furnishings Stores	$ 22,992	$ 22,373	2.8%
443	Electronics and Appliance Stores	$ 22,518	$ 19,954	12.8%
561	Administrative and Support Services	$ 20,068	$ 18,678	7.4%
113	Forestry and Logging	$ 19,806	N/A	N/A
111	Crop Production	$ 18,757	N/A	N/A
812	Personal and Laundry Services	$ 17,616	$ 16,609	6.1%
453	Miscellaneous Store Retailers	$ 17,418	$ 16,011	8.8%
711	Performing Arts, Spectator Sports, and Related Industries	$ 17,186	$ 15,149	13.4%
452	General Merchandise Stores	$ 17,134	$ 15,058	13.8%
519	Other Information Services	$ 17,098	$ 15,090	13.3%
451	Sporting Goods, Hobby, Book, and Music Stores	$ 16,941	$ 15,181	11.6%
447	Gasoline Stations	$ 15,459	$ 14,161	9.2%
445	Food and Beverage Stores	$ 14,958	$ 13,861	7.9%
814	Private Households	$ 14,697	$ 18,457	-20.4%
813	Religious, Grantmaking, Civic, Professional, and Similar Organizations	$ 14,590	$ 14,441	1.0%
515	Broadcasting (except Internet)	$ 14,272	$ 13,493	5.8%
448	Clothing and Clothing Accessories Stores	$ 13,376	$ 12,288	8.9%
721	Accommodation	$ 12,473	$ 11,475	8.7%
512	Motion Picture and Sound Recording Industries	$ 11,840	$ 20,176	-41.3%
722	Food Services and Drinking Places	$ 10,892	$ 10,117	7.7%

N/A = This item is not available. This is due to non-disclosure requirements, or because a calculation could not be created.

Data sources: Indiana Business Research Center based on ES202 data, U.S. Bureau of Labor Statistics

Table A 5: Industry (3-Digit NAICS) Average Annual Salary - Sorted by Wage Growth

Industry (3-Digit NAICS) Average Annual Salary Sorted by Wage Growth				
NAICS	Industry	Avg. Annual Wage 2004	Avg. Annual Wage 2001	% Change
925	Administration of Housing Programs, Urban Planning, and Community Development	$ 47,429	$ 31,140	52.3%
525	Funds, Trusts, and Other Financial Vehicles	$ 109,809	$ 72,378	51.7%
493	Warehousing and Storage	$ 24,282	$ 17,154	41.6%
424	Merchant Wholesalers, Nondurable Goods	$ 40,782	$ 30,018	35.9%
928	National Security and International Affairs	$ 49,294	$ 38,818	27.0%
926	Administration of Economic Programs	$ 34,737	$ 27,701	25.4%
425	Wholesale Electronic Markets and Agents and Brokers	$ 32,798	$ 26,431	24.1%
337	Furniture and Related Product Manufacturing	$ 34,302	$ 27,962	22.7%
327	Nonmetallic Mineral Product Manufacturing	$ 41,740	$ 34,237	21.9%
322	Paper Manufacturing	$ 38,158	$ 31,621	20.7%
446	Health and Personal Care Stores	$ 26,527	$ 22,302	18.9%
531	Real Estate	$ 23,792	$ 20,200	17.8%
524	Insurance Carriers and Related Activities	$ 39,606	$ 33,653	17.7%
517	Telecommunications	$ 48,856	$ 41,532	17.6%
924	Administration of Environmental Quality Programs	$ 25,064	$ 21,321	17.6%
811	Repair and Maintenance	$ 26,816	$ 22,878	17.2%
311	Food Manufacturing	$ 39,410	$ 33,893	16.3%
522	Credit Intermediation and Related Activities	$ 35,312	$ 30,419	16.1%
339	Miscellaneous Manufacturing	$ 32,630	$ 28,147	15.9%
331	Primary Metal Manufacturing	$ 42,653	$ 36,876	15.7%
326	Plastics and Rubber Products Manufacturing	$ 32,466	$ 28,298	14.7%
325	Chemical Manufacturing	$ 60,604	$ 53,041	14.3%
621	Ambulatory Health Care Services	$ 44,174	$ 38,678	14.2%
452	General Merchandise Stores	$ 17,134	$ 15,058	13.8%
921	Executive, Legislative, and Other General Government Support	$ 28,116	$ 24,722	13.7%
423	Merchant Wholesalers, Durable Goods	$ 35,505	$ 31,265	13.6%
622	Hospitals	$ 32,563	$ 28,678	13.5%
711	Performing Arts, Spectator Sports, and Related Industries	$ 17,186	$ 15,149	13.4%
491	Postal Service	$ 41,604	$ 36,716	13.3%
519	Other Information Services	$ 17,098	$ 15,090	13.3%
443	Electronics and Appliance Stores	$ 22,518	$ 19,954	12.8%
451	Sporting Goods, Hobby, Book, and Music Stores	$ 16,941	$ 15,181	11.6%
333	Machinery Manufacturing	$ 36,946	$ 33,525	10.2%
321	Wood Product Manufacturing	$ 30,246	$ 27,646	9.4%
484	Truck Transportation	$ 34,266	$ 31,366	9.2%
447	Gasoline Stations	$ 15,459	$ 14,161	9.2%
562	Waste Management and Remediation Services	$ 29,502	$ 27,050	9.1%
441	Motor Vehicle and Parts Dealers	$ 32,723	$ 30,060	8.9%
448	Clothing and Clothing Accessories Stores	$ 13,376	$ 12,288	8.9%
453	Miscellaneous Store Retailers	$ 17,418	$ 16,011	8.8%
332	Fabricated Metal Product Manufacturing	$ 36,087	$ 33,187	8.7%

Continued.

Industry (3-Digit NAICS) Average Annual Salary Sorted by Wage Growth (Continued)				
NAICS	Industry	Avg. Annual Wage 2004	Avg. Annual Wage 2001	% Change
721	Accommodation	$ 12,473	$ 11,475	8.7%
221	Utilities	$ 50,575	$ 46,580	8.6%
445	Food and Beverage Stores	$ 14,958	$ 13,861	7.9%
623	Nursing and Residential Care Facilities	$ 24,564	$ 22,781	7.8%
722	Food Services and Drinking Places	$ 10,892	$ 10,117	7.7%
561	Administrative and Support Services	$ 20,068	$ 18,678	7.4%
488	Support Activities for Transportation	$ 30,343	$ 28,293	7.2%
237	Heavy and Civil Engineering Construction	$ 44,009	$ 41,053	7.2%
323	Printing and Related Support Activities	$ 35,753	$ 33,508	6.7%
812	Personal and Laundry Services	$ 17,616	$ 16,609	6.1%
336	Transportation Equipment Manufacturing	$ 37,474	$ 35,416	5.8%
922	Justice, Public Order, and Safety Activities	$ 34,641	$ 32,746	5.8%
515	Broadcasting (except Internet)	$ 14,272	$ 13,493	5.8%
923	Administration of Human Resource Programs	$ 31,810	$ 30,084	5.7%
492	Couriers and Messengers	$ 27,130	$ 25,898	4.8%
238	Specialty Trade Contractors	$ 29,804	$ 28,951	2.9%
442	Furniture and Home Furnishings Stores	$ 22,992	$ 22,373	2.8%
611	Educational Services	$ 30,910	$ 30,194	2.4%
236	Construction of Buildings	$ 30,000	$ 29,589	1.4%
813	Religious, Grantmaking, Civic, Professional, and Similar Organizations	$ 14,590	$ 14,441	1.0%
444	Building Material and Garden Equipment and Supplies Dealers	$ 25,785	$ 25,934	-0.6%
334	Computer and Electronic Product Manufacturing	$ 50,106	$ 50,445	-0.7%
335	Electrical Equipment, Appliance, and Component Manufacturing	$ 24,233	$ 24,641	-1.7%
541	Professional, Scientific, and Technical Services	$ 32,778	$ 33,780	-3.0%
511	Publishing Industries (except Internet)	$ 23,640	$ 24,848	-4.9%
523	Securities, Commodity Contracts, and Other Financial Investments and Related Activities	$ 71,765	$ 85,458	-16.0%
814	Private Households	$ 14,697	$ 18,457	-20.4%
512	Motion Picture and Sound Recording Industries	$ 11,840	$ 20,176	-41.3%
551	Management of Companies and Enterprises	$ 47,983	N/A	N/A
212	Mining (except Oil and Gas)	$ 36,837	N/A	N/A
113	Forestry and Logging	$ 19,806	N/A	N/A
111	Crop Production	$ 18,757	N/A	N/A

N/A = This item is not available. This is due to non-disclosure requirements, or because a calculation could not be created.

Data sources: Indiana Business Research Center based on ES202 data, U.S. Bureau of Labor Statistics

Table A 6: Region 10 Industry Job Creation - Ranked by New Jobs

Region 10 Industry Job Creation - Ranked by New Jobs 2001 - 2004			
NAICS	Industry	Job Growth	Percentage Growth
611	Educational Services	638	9.1%
561	Administrative and Support Services	585	16.9%
722	Food Services and Drinking Places	528	7.2%
622	Hospitals	400	10.7%
621	Ambulatory Health Care Services	236	7.8%
236	Construction of Buildings	184	18.1%
522	Credit Intermediation and Related Activities	183	11.2%
334	Computer and Electronic Product Manufacturing	178	28.7%
424	Merchant Wholesalers, Nondurable Goods	147	28.4%
452	General Merchandise Stores	141	4.3%
423	Merchant Wholesalers, Durable Goods	137	8.1%
524	Insurance Carriers and Related Activities	133	15.9%
493	Warehousing and Storage	102	85.7%
447	Gasoline Stations	92	9.3%
321	Wood Product Manufacturing	88	4.2%
238	Specialty Trade Contractors	69	2.0%
444	Building Material and Garden Equipment and Supplies Dealers	66	6.5%
237	Heavy and Civil Engineering Construction	65	6.9%
446	Health and Personal Care Stores	63	8.2%
331	Primary Metal Manufacturing	55	30.8%
623	Nursing and Residential Care Facilities	50	1.9%
531	Real Estate	48	7.4%
212	Mining (except Oil and Gas)	47	10.6%
492	Couriers and Messengers	46	18.7%
484	Truck Transportation	38	1.3%

Source: Indiana Department of Workforce Development, U.S. Bureau of Labor Statistics, Covered Employment and Wages (CEW).

Table A 7: Region 10 Job Creation - Ranked by Percentage Growth

Region 10 Industry Job Creation - Ranked by Percentage Growth 2001 - 2004			
NAICS	Industry	Job Growth	Percentage Growth
493	Warehousing and Storage	102	85.7%
525	Funds, Trusts, and Other Financial Vehicles	7	43.5%
523	Securities, Commodity Contracts, and Other Financial Investments and Related Activities	33	38.5%
331	Primary Metal Manufacturing	55	30.8%
334	Computer and Electronic Product Manufacturing	178	28.7%
424	Merchant Wholesalers, Nondurable Goods	147	28.4%
562	Waste Management and Remediation Services	28	21.9%
492	Couriers and Messengers	46	18.7%
236	Construction of Buildings	184	18.1%
925	Administration of Housing Programs, Urban Planning, and Community Development	2	17.1%
561	Administrative and Support Services	585	16.9%
524	Insurance Carriers and Related Activities	133	15.9%
335	Electrical Equipment, Appliance, and Component Manufacturing	34	14.9%
522	Credit Intermediation and Related Activities	183	11.2%
712	Museums, Historical Sites, and Similar Institutions	8	11.0%
622	Hospitals	400	10.7%
212	Mining (except Oil and Gas)	47	10.6%
711	Performing Arts, Spectator Sports, and Related Industries	21	10.0%
447	Gasoline Stations	92	9.3%
611	Educational Services	638	9.1%
519	Other Information Services	17	8.4%
446	Health and Personal Care Stores	63	8.2%
423	Merchant Wholesalers, Durable Goods	137	8.1%
621	Ambulatory Health Care Services	236	7.8%
531	Real Estate	48	7.4%

Source: Indiana Department of Workforce Development, U.S. Bureau of Labor Statistics, Covered Employment and Wages (CEW).

Table A 8: Region 10 Top 25 Growth in Number of Establishments

Fastest Growth: Number of Establishments Top 25, Region 10: 2001 - 2004				
NAICS	Industry	Establishments 2004	Establishments 2001	% Growth
493	Warehousing and Storage	11	5	120.0%
212	Mining (except Oil and Gas)	25	19	31.6%
424	Merchant Wholesalers, Nondurable Goods	85	65	30.8%
492	Couriers and Messengers	13	10	30.0%
423	Merchant Wholesalers, Durable Goods	211	163	29.4%
331	Primary Metal Manufacturing	5	4	25.0%
339	Miscellaneous Manufacturing	17	14	21.4%
531	Real Estate	162	134	20.9%
561	Administrative and Support Services	238	199	19.6%
621	Ambulatory Health Care Services	373	318	17.3%
452	General Merchandise Stores	51	44	15.9%
311	Food Manufacturing	26	23	13.0%
236	Construction of Buildings	211	187	12.8%
611	Educational Services	106	94	12.8%
924	Administration of Environmental Quality Programs	18	16	12.5%
334	Computer and Electronic Product Manufacturing	9	8	12.5%
335	Electrical Equipment, Appliance, and Component Manufacturing	9	8	12.5%
237	Heavy and Civil Engineering Construction	46	41	12.2%
541	Professional, Scientific, and Technical Services	402	361	11.4%
326	Plastics and Rubber Products Manufacturing	21	19	10.5%
238	Specialty Trade Contractors	445	406	9.6%
812	Personal and Laundry Services	121	111	9.0%
532	Rental and Leasing Services	49	45	8.9%
519	Other Information Services	13	12	8.3%
524	Insurance Carriers and Related Activities	132	123	7.3%

N/A = This item is not available. This is due to non-disclosure requirements, or because a calculation could not be created.

Data sources: Indiana Business Research Center based on ES202 data, U.S. Bureau of Labor Statistics

Table A 9: Region 10 Historical Employment Growth - Ranked by Percentage Growth

HISTORICAL EMPLOYMENT GROWTH BY INDUSTRY - REGION 10 RANKED BY PERCENTAGE JOB GROWTH (WITH 1994 BASE YEAR)					
NAICS	Industry	Jobs 2004	Change in Jobs	Average Annual Wage 2004	Annualized Growth
71	Arts, Entertainment, and Recreation	2965	2262	$ 25,864	15.5%
56	Administrative and Support and Waste Management and Remediation Services	4222	1811	$ 20,424	5.8%
21	Mining	515	176	$ 36,849	4.3%
54	Professional, Scientific, and Technical Services	1980	669	$ 32,778	4.2%
52	Finance and Insurance	2939	919	$ 38,771	3.8%
42	Wholesale Trade	2732	649	$ 36,568	2.7%
48-49	Transportation and Warehousing	6015	1367	$ 35,750	2.6%
23	Construction	5699	1172	$ 32,341	2.3%
62	Health Care and Social Services	11762	2065	$ 32,359	1.9%
61	Educational Services	7689	1253	$ 30,910	1.8%
72	Accommodation and Food Services	8546	1346	$ 11,020	1.7%
81	Other Services(Except Public Administration)	2721	287	$ 20,075	1.1%
55	Management of Companies and Enterprises	293	18	$ 47,983	1.1%
92	Public Administration	5136	357	$ 30,809	0.7%
31-33	Manufacturing	21149	223	$ 36,896	0.1%
53	Real Estate and Rental and Leasing	1004	0	$ 22,654	0.0%
44-45	Retail Trade	13165	-95	$ 20,527	-0.1%
51	Information	879	-66	$ 26,985	-0.7%
22	Utilities	579	-50	$ 50,575	-0.8%
11	Agriculture, Forestry, Fishing and Hunting	268	-76	$ 18,986	-2.5%
	All Industries - Region 10	*100261*	*14270*	*$ 29,232.00*	*1.5%*

Source: Indiana Department of Workforce Development.

Table A 10: Region 10 Historical Employment Growth - 3 Digit NAICS Ranked by Percentage Growth

HISTORICAL EMPLOYMENT GROWTH BY INDUSTRY - REGION 10 RANKED BY ANNUALIZED PERCENTAGE JOB GROWTH (WITH 1994 BASE YEAR)						
NAICS	Industry	Jobs 2004	Change in Jobs	Annualized Growth	Avg. Annual Wage 2004	Base Year (if different from 1994)
525	Funds, Trusts, and Other Financial Vehicles	23	11	24.2%	$ 109,809	2001
493	Warehousing and Storage	223	152	12.1%	$ 24,282	
523	Securities, Commodity Contracts, and Other Financial Investments and Related Activities	117	32	11.2%	$ 71,765	2001
562	Waste Management and Remediation Services	159	95	9.5%	$ 29,502	
115	Support Activities for Agriculture and Forestry	4	2	8.0%	N/A	1995
492	Couriers and Messengers	293	148	7.3%	$ 27,130	
212	Mining (except Oil and Gas)	488	60	6.8%	$ 36,837	2002
334	Computer and Electronic Product Manufacturing	799	350	5.9%	$ 50,106	
336	Transportation Equipment Manufacturing	3162	1365	5.8%	$ 37,474	
922	Justice, Public Order, and Safety Activities	249	107	5.8%	$ 34,641	
928	National Security and International Affairs	21	9	5.8%	$ 49,294	
561	Administrative and Support Services	4063	1716	5.6%	$ 20,068	
925	Administration of Housing Programs, Urban Planning, and Community Development	12	5	5.5%	$ 47,429	
423	Merchant Wholesalers, Durable Goods	1841	689	4.8%	$ 35,505	
541	Professional, Scientific, and Technical Services	1980	669	4.2%	$ 32,778	
524	Insurance Carriers and Related Activities	975	318	4.0%	$ 39,606	
813	Religious, Grantmaking, Civic, Professional, and Similar Organizations	841	255	3.7%	$ 14,590	
621	Ambulatory Health Care Services	3287	954	3.5%	$ 44,174	
488	Support Activities for Transportation	247	67	3.2%	$ 30,343	
111	Crop Production	162	40	3.2%	$ 18,757	1995
522	Credit Intermediation and Related Activities	1824	488	3.2%	$ 35,312	
519	Other Information Services	213	35	3.0%	$ 17,098	1998
238	Specialty Trade Contractors	3485	864	2.9%	$ 29,804	
452	General Merchandise Stores	3402	839	2.9%	$ 17,134	
924	Administration of Environmental Quality Programs	237	58	2.8%	$ 25,064	

Continued

HISTORICAL EMPLOYMENT GROWTH BY INDUSTRY - REGION 10, Continued RANKED BY ANNUALIZED PERCENTAGE JOB GROWTH (WITH 1994 BASE YEAR)						
NAICS	Industry	Jobs 2004	Change in Jobs	Annualized Growth	Avg. Annual Wage 2004	Base Year (if different from 1994)
484	Truck Transportation	3044	661	2.5%	$ 34,266	
311	Food Manufacturing	2054	439	2.4%	$ 39,410	
321	Wood Product Manufacturing	2167	443	2.3%	$ 30,246	
453	Miscellaneous Store Retailers	846	172	2.3%	$ 17,418	
722	Food Services and Drinking Places	7855	1398	2.0%	$ 10,892	
517	Telecommunications	249	44	2.0%	$ 48,856	
335	Electrical Equipment, Appliance, and Component Manufacturing	265	29	2.0%	$ 24,233	1998
237	Heavy and Civil Engineering Construction	1001	170	1.9%	$ 44,009	
611	Educational Services	7689	1253	1.8%	$ 30,910	
531	Real Estate	710	109	1.7%	$ 23,792	
711	Performing Arts, Spectator Sports, and Related Industries	233	35	1.6%	$ 17,186	
622	Hospitals	4136	603	1.6%	$ 32,563	
326	Plastics and Rubber Products Manufacturing	2337	335	1.6%	$ 32,466	
443	Electronics and Appliance Stores	228	26	1.2%	$ 22,518	
236	Construction of Buildings	1213	138	1.2%	$ 30,000	
811	Repair and Maintenance	1029	112	1.2%	$ 26,816	
515	Broadcasting (except Internet)	75	7	1.1%	$ 14,272	1995
551	Management of Companies and Enterprises	293	18	1.1%	$ 47,983	1998
113	Forestry and Logging	51	5	1.0%	$ 19,806	
424	Merchant Wholesalers, Nondurable Goods	666	65	1.0%	$ 40,782	
446	Health and Personal Care Stores	830	81	1.0%	$ 26,527	
491	Postal Service	506	47	1.0%	$ 41,604	
327	Nonmetallic Mineral Product Manufacturing	501	40	0.8%	$ 41,740	
331	Primary Metal Manufacturing	236	16	0.7%	$ 42,653	
921	Executive, Legislative, and Other General Government Support	2627	134	0.5%	$ 28,116	

Continued

HISTORICAL EMPLOYMENT GROWTH BY INDUSTRY - REGION 10, Continued RANKED BY ANNUALIZED PERCENTAGE JOB GROWTH (WITH 1994 BASE YEAR)						
NAICS	Industry	Jobs 2004	Change in Jobs	Annualized Growth	Avg. Annual Wage 2004	Base Year (if different from 1994)
323	Printing and Related Support Activities	1482	60	0.4%	$ 35,753	
923	Administration of Human Resource Programs	316	10	0.3%	$ 31,810	
926	Administration of Economic Programs	1674	34	0.2%	$ 34,737	
441	Motor Vehicle and Parts Dealers	2004	33	0.2%	$ 32,723	
322	Paper Manufacturing	349	1	0.0%	$ 38,158	
812	Personal and Laundry Services	772	-21	-0.3%	$ 17,616	
623	Nursing and Residential Care Facilities	2644	-127	-0.5%	$ 24,564	
332	Fabricated Metal Product Manufacturing	1574	-92	-0.6%	$ 36,087	
721	Accommodation	691	-52	-0.7%	$ 12,473	
333	Machinery Manufacturing	1671	-140	-0.8%	$ 36,946	
444	Building Material and Garden Equipment and Supplies Dealers	1078	-93	-0.8%	$ 25,785	
221	Utilities	579	-50	-0.8%	$ 50,575	
445	Food and Beverage Stores	2639	-269	-1.0%	$ 14,958	
451	Sporting Goods, Hobby, Book, and Music Stores	270	-36	-1.2%	$ 16,941	
442	Furniture and Home Furnishings Stores	250	-40	-1.5%	$ 22,992	
325	Chemical Manufacturing	804	-299	-3.1%	$ 60,604	
447	Gasoline Stations	1085	-422	-3.2%	$ 15,459	
337	Furniture and Related Product Manufacturing	2395	-988	-3.4%	$ 34,302	
511	Publishing Industries (except Internet)	214	-99	-3.7%	$ 23,640	
425	Wholesale Electronic Markets and Agents and Brokers	225	-105	-3.8%	$ 32,798	
339	Miscellaneous Manufacturing	936	-483	-4.1%	$ 32,630	
512	Motion Picture and Sound Recording Industries	113	-78	-5.1%	$ 11,840	
814	Private Households	79	-59	-5.4%	$ 14,697	
448	Clothing and Clothing Accessories Stores	384	-319	-5.9%	$ 13,376	

Source: Indiana Department of Workforce Development.

Table A 11: Projected Employment Growth by Industry - Ranked by Number of Jobs (2002 base year)

PROJECTED EMPLOYMENT GROWTH BY INDUSTRY - REGION 10 TOP 25 IN ABSOLUTE JOB GROWTH (WITH 2002 BASE YEAR)					
NAICS	Industry	Base Year employment, 2002	Projected Year employment, 2012	Projected employment change from base year (2002) to target year	Percent projected employment change from base year 2002
611000	Educational Services	7,280	8720	1,440	19.8%
561000	Administrative and Support Services	4,110	5450	1,340	32.6%
621000	Ambulatory Health Care Services	3,030	4020	990	32.7%
722000	Food Services and Drinking Places	7,280	8030	750	10.3%
622000	Hospitals	3,730	4210	480	12.9%
541000	Professional, Scientific, and Technical Services	1,970	2420	450	22.8%
484000	Truck Transportation	2,870	3260	390	13.6%
326000	Plastics and Rubber Products Manufacturing	2,260	2610	350	15.5%
238000	Specialty Trade Contractors	3,250	3530	280	8.6%
623000	Nursing and Residential Care Facilities	2,540	2770	230	9.1%
522000	Credit Intermediation and Related Activities	1,660	1880	220	13.3%
524000	Insurance Carriers and Related Activities	940	1120	180	19.1%
453000	Miscellaneous Store Retailers	890	1060	170	19.1%
441000	Motor Vehicle and Parts Dealers	1,920	2070	150	7.8%
321000	Wood Product Manufacturing	2,030	2180	150	7.4%
337000	Furniture and Related Product Manufacturing	2,810	2940	130	4.6%
311000	Food Manufacturing	2,110	2240	130	6.2%
452000	General Merchandise Stores	3,370	3500	130	3.9%
811000	Repair and Maintenance	1,030	1140	110	10.7%
237000	Heavy and Civil Engineering Construction	970	1080	110	11.3%
423000	Merchant Wholesalers, Durable Goods	1,680	1780	100	6.0%
443000	Electronics and Appliance Stores	250	340	90	36.0%
221000	Utilities	540	630	90	16.7%
517000	Telecommunications	260	340	80	30.8%
493000	Warehousing and Storage	120	190	70	58.3%

Source: Indiana Department of Workforce Development.

Table A 12: Projected Employment Growth by Industry - Ranked by Percentage Growth (2002 base year)

PROJECTED EMPLOYMENT GROWTH BY INDUSTRY - REGION 10 TOP 25 IN PERCENTAGE JOB GROWTH (WITH 2002 BASE YEAR)					
NAICS	Industry	Base Year employment, 2002	Projected Year employment, 2012	Projected employment change from base year (2002) to target year	Percent projected employment change from base year 2002
493000	Warehousing and Storage	120	190	70	58.3%
443000	Electronics and Appliance Stores	250	340	90	36.0%
621000	Ambulatory Health Care Services	3,030	4020	990	32.7%
561000	Administrative and Support Services	4,110	5450	1,340	32.6%
517000	Telecommunications	260	340	80	30.8%
491000	Postal Service	70	90	20	28.6%
541000	Professional, Scientific, and Technical Services	1,970	2420	450	22.8%
488000	Support Activities for Transportation	290	350	60	20.7%
611000	Educational Services	7,280	8720	1,440	19.8%
442000	Furniture and Home Furnishings Stores	310	370	60	19.4%
524000	Insurance Carriers and Related Activities	940	1120	180	19.1%
453000	Miscellaneous Store Retailers	890	1060	170	19.1%
221000	Utilities	540	630	90	16.7%
562000	Waste Management and Remediation Services	120	140	20	16.7%
326000	Plastics and Rubber Products Manufacturing	2,260	2610	350	15.5%
711000	Performing Arts, Spectator Sports, and Related Industries	200	230	30	15.0%
484000	Truck Transportation	2,870	3260	390	13.6%
522000	Credit Intermediation and Related Activities	1,660	1880	220	13.3%
622000	Hospitals	3,730	4210	480	12.9%
551000	Management of Companies and Enterprises	330	370	40	12.1%
237000	Heavy and Civil Engineering Construction	970	1080	110	11.3%
811000	Repair and Maintenance	1,030	1140	110	10.7%
722000	Food Services and Drinking Places	7,280	8030	750	10.3%
523000	Securities, Commodity Contracts, and Other Financial Investments and Related Activities	100	110	10	10.0%
623000	Nursing and Residential Care Facilities	2,540	2770	230	9.1%

Source: Indiana Department of Workforce Development.

Table A 13: Projected Employment Growth by Industry - Ranked by Number of Jobs (2004 base year)

PROJECTED EMPLOYMENT GROWTH BY INDUSTRY - REGION 10 TOP 25 IN ABSOLUTE JOB GROWTH (WITH 2004 BASE YEAR)					
NAICS	Industry	Base Year employment, 2004	Projected Year employment, 2012	Projected employment change from base year (2002) to target year	Percent projected employment change from base year 2002
561000	Administrative and Support Services	4,044	5450	1,406	34.8%
611000	Educational Services	7,682	8720	1,038	13.5%
621000	Ambulatory Health Care Services	3,267	4020	754	23.1%
337000	Furniture and Related Product Manufacturing	2,392	2940	548	22.9%
541000	Professional, Scientific, and Technical Services	1,955	2420	465	23.8%
326000	Plastics and Rubber Products Manufacturing	2,335	2610	275	11.8%
445000	Food and Beverage Stores	2,636	2900	264	10.0%
484000	Truck Transportation	3,032	3260	228	7.5%
453000	Miscellaneous Store Retailers	840	1060	221	26.3%
722000	Food Services and Drinking Places	7,830	8030	200	2.6%
311000	Food Manufacturing	2,053	2240	187	9.1%
332000	Fabricated Metal Product Manufacturing	1,576	1730	154	9.8%
524000	Insurance Carriers and Related Activities	969	1120	151	15.6%
322000	Paper Manufacturing	350	490	140	39.9%
721000	Accommodation	687	820	133	19.4%
623000	Nursing and Residential Care Facilities	2,640	2770	131	4.9%
811000	Repair and Maintenance	1,022	1140	118	11.6%
442000	Furniture and Home Furnishings Stores	255	370	116	45.4%
443000	Electronics and Appliance Stores	225	340	115	51.1%
488000	Support Activities for Transportation	243	350	107	43.9%
452000	General Merchandise Stores	3,403	3500	97	2.8%
517000	Telecommunications	247	340	94	37.9%
237000	Heavy and Civil Engineering Construction	1,001	1080	80	7.9%
551000	Management of Companies and Enterprises	291	370	79	27.3%
441000	Motor Vehicle and Parts Dealers	1,996	2070	74	3.7%

Source: Indiana Department of Workforce Development.

Table A 14: Projected Employment Growth by Industry - Ranked by Percentage Growth (2004 base year)

PROJECTED EMPLOYMENT GROWTH BY INDUSTRY - REGION 10 TOP 25 IN PERCENTAGE JOB GROWTH (WITH 2004 BASE YEAR)					
NAICS	Industry	Base Year employment, 2004	Projected Year employment, 2012	Projected employment change from base year (2002) to target year	Percent projected employment change from base year 2002
443000	Electronics and Appliance Stores	225	340	115	51.1%
442000	Furniture and Home Furnishings Stores	255	370	116	45.4%
488000	Support Activities for Transportation	243	350	107	43.9%
322000	Paper Manufacturing	350	490	140	39.9%
517000	Telecommunications	247	340	94	37.9%
561000	Administrative and Support Services	4,044	5450	1,406	34.8%
551000	Management of Companies and Enterprises	291	370	79	27.3%
451000	Sporting Goods, Hobby, Book, and Music Stores	269	340	71	26.3%
453000	Miscellaneous Store Retailers	840	1060	221	26.3%
512000	Motion Picture and Sound Recording Industries	112	140	28	24.6%
541000	Professional, Scientific, and Technical Services	1,955	2420	465	23.8%
621000	Ambulatory Health Care Services	3,267	4020	754	23.1%
337000	Furniture and Related Product Manufacturing	2,392	2940	548	22.9%
511000	Publishing Industries (except Internet)	212	260	48	22.8%
721000	Accommodation	687	820	133	19.4%
425000	Wholesale Electronic Markets and Agents and Brokers	223	260	37	16.6%
524000	Insurance Carriers and Related Activities	969	1120	151	15.6%
611000	Educational Services	7,682	8720	1,038	13.5%
111000	Crop Production	143	160	17	11.9%
326000	Plastics and Rubber Products Manufacturing	2,335	2610	275	11.8%
811000	Repair and Maintenance	1,022	1140	118	11.6%
445000	Food and Beverage Stores	2,636	2900	264	10.0%
332000	Fabricated Metal Product Manufacturing	1,576	1730	154	9.8%
812000	Personal and Laundry Services	766	840	74	9.7%
221000	Utilities	577	630	54	9.3%

Source: Indiana Department of Workforce Development.

Table A 15: Region 10 Location Quotient – 2 Digit NAICS Ranked by U.S. Base

LOCATION QUOTIENT BY INDUSTRY - REGION 10 RANKED BY US BASE							
NAICS	Industry	Jobs 2004	Jobs LQ 2004 (IN base)	Jobs LQ 2004 (Midwest base)	Jobs LQ 2004 (US base)	Jobs 2001 LQ (US base)	Change in LQ
31-33	Manufacturing	21103	1.05	1.63	1.92	1.81	0.11
71	Arts, Entertainment, and Recreation	2880	1.93	1.95	1.76	1.87	-0.11
48-49	Transportation and Warehousing	6128	1.39	1.45	1.52	1.58	-0.06
21	Mining	505	2.24	2.61	1.24	1.05	0.19
44-45	Retail Trade	13470	1.13	1.17	1.12	1.13	-0.01
72	Accommodation and Food Services	8481	1.04	1.15	1.03	1.03	0
23	Construction	5729	1.09	1.26	1.02	0.97	0.05
62	Health Care and Social Services	11873	0.99	0.9	0.97	0.94	0.03
22	Utilities	579	1.14	1.19	0.92	0.87	0.05
92	Public Administration	4851	1.09	0.97	0.89	1.03	-0.14
61	Educational Services	8186	0.93	0.85	0.89	0.87	0.02
81	Other Services(Except Public Administration)	2624	0.9	0.79	0.79	0.82	-0.03
56	Administrative and Support and Waste Management and Remediation Services	4370	0.8	0.75	0.7	0.67	0.03
52	Finance and Insurance	3007	0.85	0.6	0.67	0.62	0.05
42	Wholesale Trade	2773	0.66	0.63	0.63	0.57	0.06
53	Real Estate and Rental and Leasing	1004	0.79	0.64	0.61	0.65	-0.04
54	Professional, Scientific, and Technical Services	1916	0.61	0.37	0.36	0.37	-0.01
51	Information	873	0.53	0.37	0.35	0.37	-0.02
55	Management of Companies and Enterprises	288	0.3	0.21	0.22	0.24	-0.02
	All Industry, Region 10	100917					

N/A = This item is not available. This is due to non-disclosure requirements, or because a calculation could not be created.
Data sources: Indiana Business Research Center based on ES202 data, U.S. Bureau of Labor Statistics

Table A 16: Region 10 Location Quotient – 3 Digit NAICS Ranked by U.S. Base

LOCATION QUOTIENT - REGION 10 RANKED BY US BASE - TOP 20 INDUSTRIES							
NAICS	Industry	Jobs 2004	Jobs LQ 2004 (IN base)	Jobs LQ 2004 (Midwest base)	Jobs LQ 2004 (US base)	Jobs 2001 LQ (US base)	Change in LQ
321	Wood Product Manufacturing	2187	3.11	6.29	5.12	4.64	0.48
337	Furniture and Related Product Manufacturing	2183	2.31	4.93	5.02	6.1	-1.08
326	Plastics and Rubber Products Manufacturing	2331	1.52	2.79	3.77	3.57	0.2
926	Administration of Economic Programs	1518	3.92	3.82	3.39	5.21	-1.82
212	Mining (except Oil and Gas)	487	2.27	3	3.06	N/A	N/A
484	Truck Transportation	3172	1.82	3.06	3	2.79	0.21
323	Printing and Related Support Activities	1439	2.09	2.25	2.84	2.7	0.14
336	Transportation Equipment Manufacturing	3225	0.66	1.45	2.32	2.22	0.1
333	Machinery Manufacturing	1716	1.11	1.26	1.95	1.7	0.25
339	Miscellaneous Manufacturing	925	0.9	1.66	1.83	1.69	0.14
311	Food Manufacturing	2113	1.86	1.93	1.83	1.85	-0.02
447	Gasoline Stations	1068	1.23	1.83	1.6	1.44	0.16
452	General Merchandise Stores	3660	1.32	1.6	1.54	1.51	0.03
519	Other Information Services	208	0.87	1.05	1.48	1.46	0.02
332	Fabricated Metal Product Manufacturing	1576	0.75	1	1.36	1.6	-0.24
441	Motor Vehicle and Parts Dealers	1980	1.33	1.58	1.36	1.38	-0.02
327	Nonmetallic Mineral Product Manufacturing	503	0.92	1.45	1.3	1.28	0.02
325	Chemical Manufacturing	814	0.71	1.07	1.21	1.13	0.08
237	Heavy and Civil Engineering Construction	1021	1.71	2.01	1.19	1	0.19
445	Food and Beverage Stores	2621	1.46	1.24	1.19	1.23	-0.04

N/A = This item is not available. This is due to non-disclosure requirements, or because a calculation could not be created.
Data sources: Indiana Business Research Center based on ES202 data, U.S. Bureau of Labor Statistics

Table A 17: Region 10 Shift-Share Analysis – 2 Digit NAICS Ranked by Regional Shift

REGION 10 SHIFT-SHARE ANALYSIS JOBS 2001 - 2004						
NAICS	**Industry**	**Employment 2004**	**Actual Change in Employment**	**National Growth**	**Industry Mix**	**Regional Shift**
56	Administrative and Support and Waste Management and Remediation Services	4370	1118	61	130	927
31-33	Manufacturing	21103	-2960	453	-4122	709
52	Finance and Insurance	3007	581	46	65	471
23	Construction	5729	959	90	435	434
42	Wholesale Trade	2773	271	47	-79	303
61	Educational Services	8186	814	139	397	278
21	Mining	505	83	8	4	71
48-49	Transportation and Warehousing	6128	-73	117	-254	64
22	Utilities	579	22	10	-24	36
55	Management of Companies and Enterprises	288	-8	6	-11	-3
53	Real Estate and Rental and Leasing	1004	41	18	30	-7
51	Information	873	-171	20	-179	-11
81	Other Services(Except Public Administration)	2624	4	49	5	-50
62	Health Care and Social Services	11873	1061	203	918	-60
54	Professional, Scientific, and Technical Services	1916	-121	38	-64	-95
44-45	Retail Trade	13470	297	248	178	-129
71	Arts, Entertainment, and Recreation	2880	95	52	270	-227
72	Accommodation and Food Services	8481	536	150	622	-236
92	Public Administration	4851	-1638	122	288	-2048
	Total	*100917*	*985*	*1877*	*-1391*	*425*

Data sources: Indiana Business Research Center based on ES202 data, U.S. Bureau of Labor Statistics

Table A 18: Region 10 Shift-Share Analysis (Wages) – 2 Digit NAICS Ranked by Regional Shift

REGION 10 SHIFT-SHARE ANALYSIS AVERAGE WEEKLY WAGES, 2001 - 2004						
NAICS	Industry	Averge Weekly Wages 2004	Actual Change in Wages	National Growth	Industry Mix	Regional Shift
52	Finance and Insurance	815.86	131.75	91.72	-179.24	219.28
42	Wholesale Trade	786.14	219.71	75.94	26.94	116.83
21	Mining	772.04	158.33	82.28	-26.56	102.61
22	Utilities	978.05	76.7	120.84	-120.94	76.8
92	Public Administration	614.38	141.59	63.39	20.09	58.12
55	Management of Companies and Enterprises	1050.6	106.09	126.63	-62.27	41.74
62	Health Care and Social Services	689.68	186.83	67.42	85.86	33.55
51	Information	552.72	52.55	67.06	-41.98	27.47
31-33	Manufacturing	741.36	117.03	83.7	18.81	14.52
44-45	Retail Trade	429.86	69.49	48.31	10.01	11.17
81	Other Services(Except Public Administration)	415.64	69.26	46.44	16.71	6.11
23	Construction	706.77	129.03	77.46	48.94	2.63
72	Accommodation and Food Services	215.39	24.34	25.61	-0.88	-0.39
56	Administrative and Support and Waste Management and Remediation Services	432.14	70.78	48.45	25.81	-3.48
71	Arts, Entertainment, and Recreation	554.27	121.91	57.97	75.48	-11.53
53	Real Estate and Rental and Leasing	481.59	71.66	54.96	46.78	-30.08
48-49	Transportation and Warehousing	720.81	62.22	88.3	11.35	-37.43
54	Professional, Scientific, and Technical Services	735.74	102.97	84.83	83.17	-65.03
61	Educational Services	571.06	-17.13	78.86	-12.06	-83.93
	Total	*599.67*	*92.75*	*67.96*	*0*	*24.79*
Data sources: Indiana Business Research Center based on ES202 data, U.S. Bureau of Labor Statistics						

APPENDIX B – ERISS SURVEY ANALYSIS

Table B 1: Statewide Short-Run Occupation Growth Projections - Ranked by Percentage Growth

STATEWIDE OCCUPATIONS SHORT-RUN GROWTH PROJECTIONS (Top 30 by Percent)						
		Median Salary		Companies	Anticipated 12 Month	
	Occupation Title	No-Experience	Experienced	Hiring	Growth	Percent
1	Reservation and Transportation Ticket Agents and Travel Clerks	N/A	N/A	3	85	63%
2	Engineering Technicians (Except Drafters, Electrical, or Electronic)	N/A	N/A	0	24	35%
3	Computer Programmers	N/A	$ 22.12	6	47	20%
4	Welders, Cutters, Solderers, and Brazers	$ 10.00	$ 13.00	13	129	19%
5	Drywall and Ceiling Tile Installers	N/A	N/A	4	15	18%
6	Loan Officers and Counselors	$ 12.02	$ 14.42	7	109	16%
7	Cement Masons and Concrete Finishers	N/A	$ 19.00	4	18	16%
8	Plating and Coating Machine Operators (Metal and Plastic)	N/A	N/A	2	17	15%
9	Emergency Medical Technicians and Paramedics	$ 8.25	$ 12.50	7	50	12%
10	Real Estate Sales Agents	N/A	N/A	4	18	11%
11	Archivists	N/A	N/A	1	1	10%
12	Supervisors of Housekeeping and Janitorial Workers	$ 6.75	$ 9.50	8	25	10%
13	Maids and Housekeeping Cleaners	$ 6.50	$ 7.00	15	49	10%
14	Coating, Painting, and Spraying Machine Operators	$ 9.00	$ 10.25	5	36	10%
15	Training and Development Specialists	N/A	$ 11.00	2	5	9%
16	Pesticide Sprayers and Applicators	N/A	N/A	1	6	9%
17	Credit Authorizers, Checkers, and Clerks	N/A	N/A	2	25	9%
18	Forging Machine Operators (Metal and Plastic)	$ 11.00	$ 12.40	7	32	9%
19	Heat Treating Equipment Operators	$ 9.50	$ 10.56	6	13	9%
20	Conveyor Operators and Tenders	$ 9.50	$ 13.50	7	43	9%
21	Machine Feeders and Offbearers	$ 8.25	$ 10.13	9	67	9%
22	Financial Examiners	N/A	N/A	1	3	8%
23	Computer Applications Software Engineers and Web Developers	N/A	N/A	2	9	8%
24	Mechanical Drafters	N/A	$ 15.38	5	10	8%
25	Electrical & Electronic Engineering Technicians	N/A	$ 18.00	3	5	8%
26	Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	N/A	$ 13.46	5	14	8%
27	Cashiers	$ 7.00	$ 7.50	14	37	8%
28	Machinery Maintenance Worker	$ 14.50	$ 16.50	14	40	8%
29	Metal and Plastic Computer-Controlled Machine Tool Operators	$ 10.00	$ 12.00	11	83	8%
30	Extruding and Drawing Machine Operators (Metal and Plastics)	$ 9.50	$ 12.00	10	43	8%
	and Welding, Soldering, and Brazing Machine Operators	$ 9.00	$ 11.00	11	23	8%

Source: Indiana Department of Workforce Development - ERISS Survey.

Table B 2: Statewide Short-Run Occupation Growth Projections - Ranked by Jobs Growth

STATEWIDE OCCUPATIONS SHORT-RUN GROWTH PROJECTIONS (Top 30 by Count)						
	Median Salary		Companies	Anticipated 12 Month		
Occupation Title	No-Experience	Experienced	Hiring	Growth	Percent	
1 Team Assemblers	$ 8.25	$ 9.50	27	228	5%	
2 Heavy and Tractor-Trailer Truck Drivers	$ 16.83	$ 19.50	34	140	6%	
3 Welders, Cutters, Solderers, and Brazers	$ 10.00	$ 13.00	13	129	19%	
4 Helpers of Production Workers	$ 8.75	$ 9.75	23	110	5%	
5 Loan Officers and Counselors	$ 12.02	$ 14.42	7	109	16%	
6 Construction Laborers	$ 12.00	$ 15.00	18	90	6%	
7 Nursing Aides, Orderlies, and Attendants	$ 8.00	$ 8.75	20	86	4%	
8 Reservation and Transportation Ticket Agents and Travel Clerks	N/A	N/A	3	85	63%	
9 Metal and Plastic Computer-Controlled Machine Tool Operators	$ 10.00	$ 12.00	11	83	8%	
10 Machine Feeders and Offbearers	$ 8.25	$ 10.13	9	67	9%	
11 Hand Packers and Packagers	$ 8.75	$ 9.25	21	59	5%	
12 Foremen of Helpers, Laborers, and Material Movers	$ 11.25	$ 12.02	12	57	6%	
13 Emergency Medical Technicians and Paramedics	$ 8.25	$ 12.50	7	50	12%	
14 Maids and Housekeeping Cleaners	$ 6.50	$ 7.00	15	49	10%	
15 Computer Programmers	N/A	$ 22.12	6	47	20%	
16 Foremen of Production and Operating Workers	$ 10.00	$ 14.50	12	44	2%	
17 Extruding and Drawing Machine Operators (Metal and Plastics)	$ 9.50	$ 12.00	10	43	8%	
18 Conveyor Operators and Tenders	$ 9.50	$ 13.50	7	43	9%	
19 Certified Nursing Assistants	$ 8.00	$ 8.55	20	41	3%	
20 Sheet Metal Workers	$ 10.00	$ 11.00	9	41	4%	
21 Machinery Maintenance Worker	$ 14.50	$ 16.50	14	40	8%	
22 Salespersons (Retail)	$ 6.75	$ 8.00	18	38	4%	
23 Cashiers	$ 7.00	$ 7.50	14	37	8%	
24 Coating, Painting, and Spraying Machine Operators	$ 9.00	$ 10.25	5	36	10%	
25 Forging Machine Operators (Metal and Plastic)	$ 11.00	$ 12.40	7	32	9%	
26 Foremen, Construction, Mining and Drilling Work Crews	N/A	$ 23.50	4	31	5%	
27 Inspectors, Testers, Sorters, Samplers, and Weighers	$ 9.63	$ 11.00	9	30	3%	
28 Physicians and Surgeons	N/A	N/A	5	28	6%	
29 Shipping, Receiving, and Traffic Clerks	$ 9.00	$ 10.00	10	27	4%	
30 Correspondence Clerks	$ 8.00	$ 12.00	3	26	7%	

Source: Indiana Department of Workforce Development - ERISS Survey.

Table B 3: Statewide Current Openings - Top 30 by Count

STATEWIDE OCCUPATIONS: CURRENT OPENINGS (Top 30 by Count)						
	Occupation Title	Median Salary No-Experience	Median Salary Experienced	Companies Hiring	Current Openings	Average D Non-exp
1	Team Assemblers	$ 8.25	$ 9.50	27	232	10.17
2	Registered Nurses (Nurse Practitioners)	$ 18.00	$ 20.24	24	164	N/A
3	Heavy and Tractor-Trailer Truck Drivers	$ 16.83	$ 19.50	34	153	58.44
4	Certified Nursing Assistants	$ 8.00	$ 8.55	20	139	36.25
5	Nursing Aides, Orderlies, and Attendants	$ 8.00	$ 8.75	20	136	20.71
6	Construction Laborers	$ 12.00	$ 15.00	18	110	19.97
7	Helpers of Production Workers	$ 8.75	$ 9.75	23	96	24.17
8	Salespersons (Retail)	$ 6.75	$ 8.00	18	89	17.48
9	Reservation and Transportation Ticket Agents and Travel Clerks	N/A	N/A	3	81	10.08
10	Construction Heavy Equipment Operators	$ 17.00	$ 18.00	8	62	15.18
11	Licensed Practical and Licensed Vocational Nurses	$ 15.00	$ 15.00	26	61	7.98
12	Institution and Cafeteria Cooks	$ 8.00	$ 8.25	11	61	16.05
13	Computer Programmers	N/A	$ 22.12	6	58	13.98
14	Tellers	$ 7.50	$ 8.50	16	56	19.48
15	Metal and Plastic Computer-Controlled Machine Tool Operators	$ 10.00	$ 12.00	11	52	32.11
16	Cashiers	$ 7.00	$ 7.50	14	51	45.44
17	Truck Drivers, Light Or Delivery Services	$ 12.50	$ 14.85	22	50	29.68
18	Freight, Stock, and Material Movers (Hand Laborers)	$ 9.62	$ 10.00	15	49	N/A
19	Maids and Housekeeping Cleaners	$ 6.50	$ 7.00	15	42	29.56
20	Welders, Cutters, Solderers, and Brazers	$ 10.00	$ 13.00	13	42	7.82
21	Waiters and Waitresses	$ 9.00	$ 10.00	10	40	N/A
22	General Maintenance and Repair Workers	$ 10.00	$ 13.00	23	40	8.54
23	Cabinetmakers and Bench Carpenters	$ 8.00	$ 10.85	9	40	29.08
24	Loan Officers and Counselors	$ 12.02	$ 14.42	7	39	13.60
25	Food Preparation Workers	$ 7.00	$ 8.00	14	37	29.55
26	Hand Packers and Packagers	$ 8.75	$ 9.25	21	36	N/A
27	Janitors and Cleaners (Except Maids and Housekeeping Cleaners)	$ 7.25	$ 8.50	13	34	35.11
28	Carpenters	$ 11.00	$ 16.00	14	34	8.96
29	Sales Representatives	$ 13.94	$ 14.42	19	33	23.14
30	Amusement and Recreation Attendants	$ 12.00	$ 13.50	4	32	55.27

Source: Indiana Department of Workforce Development - ERISS Survey.

Table B 4: Region 10 Current Openings - Top 25 by Count

REGION 10 OCCUPATIONS: CURRENT OPENINGS (Top 25 by Count)				
Occupation Title	Currently Employed	Anticipated Employment in 12 Months	Anticipated Turnover	Positions Currently Open
1 Certified Nursing Assistants	150	150	47	18
2 Heavy and Tractor-Trailer Truck Drivers	396	412	197	17
3 Nursing Aides, Orderlies, and Attendants	27	35	19	12
4 Licensed Practical and Licensed Vocational Nurses	30	34	1	8
5 Cashiers	30	30	0	7
6 Door-To-Door Sales Workers and Street Vendors (and Related Workers)	40	40	0	7
7 Cost Estimators	6	7	0	6
8 Sheet Metal Workers	45	50	7	5
9 Telecommunications Equipment Installers and Repairers (Except Line Installers)	300	300	4	5
10 Hand Packers and Packagers	40	50	2	4
11 Construction Laborers	15	20	6	3
12 School Bus Drivers	20	20	1	3
13 Cabinetmakers and Bench Carpenters	35	35	4	2
14 Food Preparation Workers	14	14	4	2
15 Foremen of Production and Operating Workers	61	61	11	2
16 General Office Clerks	24	24	3	2
17 Inspectors, Testers, Sorters, Samplers, and Weighers	9	9	2	2
18 Janitors and Cleaners (Except Maids and Housekeeping Cleaners)	20	22	7	2
19 Molding, Coremaking, and Casting Machine Operators	52	54	0	2
20 Secretaries (Except Legal, Medical, and Executive)	38	40	5	2
21 Shipping, Receiving, and Traffic Clerks	9	11	1	2
22 Structural Iron and Steel Workers	15	17	3	2
23 Team Assemblers	10	12	0	2
24 Welders, Cutters, Solderers, and Brazers	18	22	2	2
25 Woodworking Machine Operators (Except Sawing)	30	35	3	2
Source: Indiana Department of Workforce Development - ERISS Survey.				

Table B 5: Region 10 Most In Demand Occupations - Top 30 by Count

REGION 10 OCCUPATIONS: MOST IN DEMAND (Top 30 by Count)				
Occupation Title	Currently Employed	Anticipated Employment in 12 Months	Anticipated Turnover	Positions Currently Open
1 Heavy and Tractor-Trailer Truck Drivers	395	411	197	16
2 Telecommunications Equipment Installers and Repairers (Except Line Installers)	300	300	4	5
3 Tank Car, Truck, and Ship Loaders	180	180	67	0
4 Certified Nursing Assistants	150	150	47	18
5 Hand Packers and Packagers	140	150	2	4
6 Molding, Coremaking, and Casting Machine Operators	130	132	19	2
7 Helpers of Production Workers	70	95	11	0
8 Construction Laborers	79	82	8	3
9 Nursing Aides, Orderlies, and Attendants	69	77	19	12
10 Licensed Practical and Licensed Vocational Nurses	68	72	5	6
11 Foremen of Production and Operating Workers	56	56	10	1
12 Carpenters	50	50	0	0
13 Sheet Metal Workers	45	50	7	5
14 Team Assemblers	36	44	3	2
15 Door-To-Door Sales Workers and Street Vendors (and Related Workers)	40	40	0	7
16 Secretaries (Except Legal, Medical, and Executive)	38	40	5	2
17 Elementary and Middle School Teachers	36	36	0	0
18 Cabinetmakers and Bench Carpenters	35	35	4	2
19 Woodworking Machine Operators (Except Sawing)	30	35	3	2
20 Janitors and Cleaners (Except Maids and Housekeeping Cleaners)	31	33	7	2
21 Extruding and Drawing Machine Operators (Metal and Plastics)	30	32	4	0
22 Cashiers	30	30	0	7
23 Cutting, Punching, and Press Machine Operators (Metal)	22	30	1	0
24 Refuse and Recyclable Material Collectors	28	28	1	0
25 Sales Representatives	24	27	2	1
26 Human Resources Assistants (Except Payroll and Timekeeping)	26	26	13	0
27 Dispatchers (Except Police, Fire, and Ambulance)	25	25	2	0
28 Secondary School Teachers (Except Special and Vocational Education)	25	25	0	0
29 Welders, Cutters, Solderers, and Brazers	18	22	2	2
30 General Office Clerks	20	20	2	1
Source: Indiana Department of Workforce Development - ERISS Survey.				

Table B 6: Statewide Healthcare Occupations - Time to Fill Experience Required Positions

STATEWIDE HEALTHCARE OCCUPATIONS: TIME TO FILL EXPERIENCE REQUIRED POSITIONS				
Occupation Title	Median Hourly Wage	Current Openings	Anticipated Employment in 12 months	Average Days to Fill Position
1 Physicians and Surgeons	N/A	11	504	148.28
2 Physical Therapists	$ 35.00	12	329	129.78
3 Radiologic Technologists and Technicians	$ 19.00	9	359	120
4 Respiratory Therapists	$ 17.31	24	412	93.23
5 Registered Nurses (Nurse Practitioners)	$ 20.24	164	4,711	66.69
6 Food Service Managers	$ 13.00	1	70	61.78
7 Institution and Cafeteria Cooks	$ 8.00	21	315	53.91
8 Food Service Supervisors	$ 8.60	1	128	51
9 Insurance Clerks (Claims and Policy Processing)	$ 11.00	5	264	44.57
10 Medical and Health Services Managers	$ 20.00	16	515	39.42
Source: Indiana Department of Workforce Development - ERISS Survey.				

Table B 7: Statewide Manufacturing Occupations - Time to Fill Experience Required Positions

STATEWIDE MANUFACTURING OCCUPATIONS: TIME TO FILL EXPERIENCE REQUIRED POSITIONS				
Occupation Title	Median Hourly Wage	Current Openings	Anticipated Employment in 12 months	Average Days to Fill Position
1 Sales Representatives	N/A	10	135	103.4
2 First-Line Supervisors of Customer Service / Call Center	N/A	1	59	99.6
3 Senior Executives (includes Vice Presidents and Chief Executives)	N/A	2	108	93.98
4 Financial Analysts	$ 22.84	N/A	30	93.23
5 Project Managers	N/A	2	110	92.47
6 Marketing Managers	$ 26.44	2	40	89
7 Engineering Managers	$ 26.44	5	118	84.41
8 Heat Treating Equipment Operators	$ 10.56	1	153	81.23
9 Mechanical Engineers	$ 21.64	5	226	80.02
10 Transportation, Storage, and Distribution Managers	$ 16.83	1	64	73.91
11 Treasurers, Controllers, And Chief Financial Officers	N/A	2	68	72.53
12 Human Resources Managers	$ 17.31	N/A	51	72.34
13 Tool and Die Makers	$ 15.38	6	140	71.78
14 Human Resources Assistants (Except Payroll and Timekeeping)	$ 12.00	N/A	56	69.7
15 Bill and Account Collectors	$ 12.00	1	88	68.94
16 Industrial Production Managers	$ 18.03	11	483	68.93
17 Sales Managers	N/A	N/A	28	67.6
18 Production, Planning, and Expediting Clerks	$ 10.00	4	112	64.78
19 Health and Safety Engineers (Except Mining Safety Engineers and Inspectors)	N/A	N/A	31	62.42
20 Electricians	$ 13.00	3	78	61.5
Source: Indiana Department of Workforce Development - ERISS Survey.				

Table B 8: Statewide Logistics Occupations - Time to Fill Experience Required Positions

STATEWIDE LOGISTICS OCCUPATIONS: TIME TO FILL EXPERIENCE REQUIRED POSITIONS					
	Occupation Title	Median Hourly Wage	Current Openings	Anticipated Employment in 12 months	Average Days to Fill Position
1	Advertising Sales Agents	N/A	18	334	120.39
2	Transportation, Storage, and Distribution Managers	N/A	2	21	102.8
3	Treasurers, Controllers, And Chief Financial Officers	N/A	3	60	89.36
4	Bill and Account Collectors	N/A	N/A	32	89
5	File Clerks	$ 10.00	1	63	62.07
6	First-Line Supervisors of Customer Service / Call Center	N/A	1	18	60.2
7	Dispatchers (Except Police, Fire, and Ambulance)	$ 14.42	6	212	59.76
8	Human Resources Assistants (Except Payroll and Timekeeping)	N/A	N/A	57	57.86
9	Bookkeeping, Accounting, and Auditing Clerks	$ 14.00	1	152	55.8
10	Order Clerks	$ 12.00	6	57	50.85
11	Word Processors and Typists	$ 15.00	3	126	50.85
12	General Maintenance and Repair Workers	$ 14.00	1	143	46.05
13	Database Administrators	$ 19.23	1	48	43.85
14	Emergency Medical Technicians and Paramedics	$ 12.50	28	481	42.95
15	Forklift Operators (Industrial Truck and Tractor)	$ 10.75	14	406	38.64
16	Administrative Services/Office Managers	$ 14.42	1	162	36.67
17	Billing and Posting Clerks	N/A	1	41	35.08
18	First-Line Supervisors or Managers of Transportation and Material-Moving Ma	$ 19.23	1	212	33.68
19	Diesel Engine Mechanics	$ 19.50	2	94	33.36
20	Secretaries (Except Legal, Medical, and Executive)	$ 10.19	11	225	27.72
Source: Indiana Department of Workforce Development - ERISS Survey.					

Table B 9: Statewide Healthcare Occupations - Time to Fill No-Experience Required Positions

STATEWIDE HEALTHCARE OCCUPATIONS: TIME TO FILL NO-EXPERIENCE REQUIRED POSITIONS				
Occupation Title	Median Hourly Wage	Current Openings	Anticipated Employment in 12 months	Average Days to Fill Position
1 Respiratory Therapists	$ 15.87	24	412	102.44
2 Radiologic Technologists and Technicians	$ 16.83	9	359	86.56
3 Registered Nurses (Nurse Practitioners)	$ 18.00	164	4,711	58.96
4 Recreational Therapists	$ 8.00	2	121	39.49
5 Licensed Practical and Licensed Vocational Nurses	$ 15.00	61	1,540	36.25
6 Institution and Cafeteria Cooks	$ 8.00	21	315	24.25
7 Medical and Health Services Managers	N/A	16	515	22.68
8 Nursing Aides, Orderlies, and Attendants	$ 8.00	136	2,122	20.71
9 Certified Nursing Assistants	$ 8.00	139	1,577	19.97
10 Food Preparation Workers	$ 7.50	33	453	14.96
Source: Indiana Department of Workforce Development - ERISS Survey.				

Table B 10: Statewide Manufacturing Occupations - Time to Fill No-Experience Required Positions

STATEWIDE MANUFACTURING OCCUPATIONS: TIME TO FILL NO-EXPERIENCE REQUIRED POSITIONS				
Occupation Title	Median Hourly Wage	Current Openings	Anticipated Employment in 12 months	Average Days to Fill Position
1 Sales Engineers	$ 19.23	5	176	51.44
2 General Maintenance and Repair Workers	$ 16.00	26	713	49.02
3 Order Clerks	$ 9.00	4	233	47.92
4 Mechanical Engineers	N/A	5	226	37.4
5 Welders, Cutters, Solderers, and Brazers	$ 10.00	42	798	35.1
6 Metal and Plastic Rolling Machine Operators	$ 8.50	20	503	34.7
7 Forging Machine Operators (Metal and Plastic)	$ 11.00	12	407	31.72
8 Molding, Coremaking, and Casting Machine Operators	$ 9.00	9	1,036	29.8
9 Metal and Plastic Computer-Controlled Machine Tool Operators	$ 10.00	52	1,147	29.55
10 Inspectors, Testers, Sorters, Samplers, and Weighers	$ 9.63	29	930	27.18
Source: Indiana Department of Workforce Development - ERISS Survey.				

Table B 11: Statewide Logistics Occupations - Time to Fill No-Experience Required Positions

STATEWIDE LOGISTICS OCCUPATIONS: TIME TO FILL NO-EXPERIENCE REQUIRED POSITIONS					
	Occupation Title	Median Hourly Wage	Current Openings	Anticipated Employment in 12 months	Average Days to Fill Position
1	First-Line Supervisors or Managers of Transportation and Material-Moving Managers	$ 16.83	1	212	58.8
2	Bookkeeping, Accounting, and Auditing Clerks	N/A	1	152	45.6
3	Forklift Operators (Industrial Truck and Tractor)	$ 10.00	14	406	42.2
4	Advertising Sales Agents	N/A	18	334	33.08
5	Cargo and Freight Agents	N/A	4	123	31.8
6	Truck Drivers, Light Or Delivery Services	$ 12.50	37	509	25.32
7	Dispatchers (Except Police, Fire, and Ambulance)	$ 12.50	6	212	9.38
8	Foremen of Helpers, Laborers, and Material Movers	$ 12.00	11	477	9.22
Source: Indiana Department of Workforce Development - ERISS Survey.					

Table B 12: Statewide Occupations – Ranked by Time to Fill Experience Required Positions

STATEWIDE OCCUPATIONS: TIME TO FILL POSITIONS REQUIRING EXPERIENCE				
Occupation Title	Median Hourly Wage	Low Wage	High Wage	Average Days to Fill Position
1 Physicians and Surgeons	N/A	N/A	N/A	148.28
2 Physical Therapists	$ 35.00	$ 21.00	$ 46.00	129.78
3 Radiologic Technologists and Technicians	$ 19.00	$ 16.83	$ 20.00	120
4 Recreation Workers	$ 9.00	$ 6.50	$ 15.00	115.19
5 Pharmacists	N/A	N/A	N/A	108.2
6 Cost Estimators	$ 21.63	$ 12.50	$ 40.00	98.7
7 Financial Analysts	$ 22.84	$ 11.56	$ 35.00	97.22
8 Producers and Directors	$ 14.42	$ 12.02	$ 20.67	97.09
9 Treasurers, Controllers, And Chief Financial Officers	N/A	N/A	N/A	93.96
10 Respiratory Therapists	$ 17.31	$ 15.00	$ 20.00	93.23
11 Advertising Sales Agents	$ 12.50	$ 8.67	$ 25.00	92.88
12 Project Managers	N/A	N/A	N/A	90.2
13 Engineering Managers	$ 26.44	$ 14.42	$ 33.65	87.78
14 Librarians	$ 14.42	$ 10.50	$ 16.83	84.44
15 Heat Treating Equipment Operators	$ 10.56	$ 7.00	$ 24.04	81.23
16 School Bus Drivers	N/A	N/A	N/A	78.39
17 Transportation, Storage, and Distribution Managers	$ 16.83	$ 9.00	$ 24.04	75.66
18 Senior Executives (includes Vice Presidents and Chief Executives)	N/A	N/A	N/A	75.13
19 Mechanical Engineers	$ 23.08	$ 14.00	$ 33.65	72.28
20 General and Operations Managers	$ 14.90	$ 11.38	$ 28.85	72.09
21 Financial Examiners	N/A	N/A	N/A	72
22 Tool and Die Makers	$ 15.38	$ 12.13	$ 23.00	71.78
23 Pharmacy Technicians	N/A	N/A	N/A	71.33
24 Construction Managers	$ 24.04	$ 12.95	$ 36.06	70.17
25 Sales Managers	$ 15.00	$ 12.02	$ 38.46	69.4
26 Industrial Production Managers	$ 18.03	$ 12.00	$ 38.46	68.93
27 Sales Representatives	$ 14.42	$ 8.00	$ 24.04	68.7
28 Marketing Managers	$ 19.23	$ 14.00	$ 41.09	67.8
29 Registered Nurses (Nurse Practitioners)	$ 20.24	$ 16.00	$ 28.00	67.43
30 Sales Engineers	$ 19.23	$ 12.02	$ 38.46	67.15
31 First-Line Supervisors of Customer Service / Call Center	$ 17.79	$ 9.13	$ 30.00	66.79
32 Health Educators	$ 14.42	$ 12.02	$ 28.85	65.96
33 Production, Planning, and Expediting Clerks	$ 10.00	$ 8.50	$ 14.78	64.78
34 Human Resources Assistants (Except Payroll and Timekeeping)	$ 12.50	$ 9.00	$ 20.19	64.65
35 Human Resources Managers	$ 16.83	$ 10.00	$ 26.44	64.17
36 Health and Safety Engineers (Except Mining Safety Engineers and Inspectors)	$ 19.23	$ 15.00	$ 24.04	62.42
37 Financial Managers, Branch Or Department	$ 16.83	$ 14.42	$ 36.06	61.9
38 Administrative Services/Office Managers	$ 15.00	$ 9.00	$ 24.04	60.64
39 Computer Systems Analysts	$ 21.63	$ 14.42	$ 26.44	59.4
40 Network Administrator	$ 14.42	$ 11.00	$ 28.85	58.54
41 Clinical, Counseling, and School Psychologists	N/A	N/A	N/A	58.18
42 Library Technicians (Reference Assistants)	$ 9.14	$ 8.00	$ 11.54	56.84
43 Database Administrators	$ 19.23	$ 10.00	$ 26.44	56.14
44 Dispatchers (Except Police, Fire, and Ambulance)	$ 14.42	$ 9.00	$ 19.23	55.33
45 Computer Programmers	$ 22.12	$ 12.02	$ 28.85	55.14
46 Parts Salespersons	$ 12.02	$ 10.50	$ 19.00	54.6
47 Mechanical Drafters	$ 15.38	$ 12.00	$ 22.00	54.5
48 First-Line Supervisors or Managers of Non-Retail Sales Workers	$ 17.79	$ 11.00	$ 24.04	54.17
49 Radio and Television Announcers	N/A	N/A	N/A	53.8
50 Machinery Maintenance Worker	$ 16.50	$ 8.50	$ 21.14	53.5

Source: Indiana Department of Workforce Development - ERISS Survey.

Continued

STATEWIDE OCCUPATIONS: TIME TO FILL POSITIONS REQUIRING EXPERIENCE (cont.)					
	Occupation Title	Median Hourly Wage	Low Wage	High Wage	Average Days to Fill Position
51	Purchasing Agents (Except Wholesale, Retail, and Farm Products)	$ 18.00	$ 8.00	$ 28.85	53.4
52	Computer and Information Systems Managers	$ 15.00	$ 12.00	$ 38.46	52.77
53	Bill and Account Collectors	$ 12.00	$ 6.90	$ 25.00	52.64
54	Reporters and Correspondents	$ 11.54	$ 8.00	$ 16.83	52.19
55	Highway Maintenance Workers	$ 14.18	$ 11.06	$ 17.00	51.1
56	Loan Clerks and Interviewers	$ 9.25	$ 8.65	$ 14.42	50.18
57	Budget Analysts	$ 16.83	$ 14.00	$ 28.85	49.97
58	Public Relations Managers	$ 18.27	$ 9.62	$ 39.42	48.68
59	Security Guards	$ 7.20	$ 7.20	$ 20.00	48.09
60	Food Service Managers	$ 12.00	$ 9.62	$ 15.38	48.05
61	Computer Support/Help Desk Specialist	$ 14.42	$ 8.50	$ 20.00	47.91
62	Molding, Coremaking, and Casting Machine Operators	$ 9.88	$ 7.00	$ 15.00	47.76
63	Bookkeeping, Accounting, and Auditing Clerks	$ 14.00	$ 9.13	$ 19.23	47.54
64	Correspondence Clerks	$ 12.00	$ 8.00	$ 17.00	47.15
65	Compensation, Benefits, and Job Analysis Specialists	N/A	N/A	N/A	46.42
66	Institution and Cafeteria Cooks	$ 8.25	$ 6.50	$ 10.00	46.21
67	Special Education Teachers	N/A	N/A	N/A	45.84
68	Roofers	N/A	N/A	N/A	45.44
69	Industrial Machinery Mechanics	$ 16.83	$ 10.50	$ 20.72	44.89
70	Drilling and Boring Machine Tool Operators (Metal)	$ 14.00	$ 9.50	$ 16.83	44.66
71	Insurance Clerks (Claims and Policy Processing)	$ 11.00	$ 8.75	$ 15.00	44.57
72	Advertising and Promotions Managers	$ 15.50	$ 9.62	$ 33.65	44.45
73	Accountants	$ 14.50	$ 10.00	$ 19.23	43.87
74	Office Machine Operators (Except Computer)	N/A	N/A	N/A	43.85
75	Metal and Plastic Rolling Machine Operators	$ 9.50	$ 8.00	$ 17.85	43.54
76	Diesel Engine Mechanics	$ 19.50	$ 10.00	$ 24.04	43.4
77	Extruding and Drawing Machine Operators (Metal and Plastics)	$ 12.00	$ 10.00	$ 16.50	43.39
78	Emergency Medical Technicians and Paramedics	$ 12.50	$ 9.00	$ 18.00	42.95
79	Architectural and Civil Drafters	N/A	N/A	N/A	42.8
80	Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	$ 13.46	$ 10.00	$ 25.00	42.61
81	Payroll and Timekeeping Clerks	$ 12.02	$ 9.00	$ 20.00	41.95
82	Executive Secretaries and Administrative Assistants	$ 12.00	$ 8.50	$ 23.56	41.93
83	Meeting and Convention Planners	$ 13.22	$ 12.02	$ 15.00	41.5
84	Industrial Engineers	N/A	N/A	N/A	40.44
85	General Office Clerks	$ 10.00	$ 7.00	$ 19.23	40.18
86	First-Line Supervisors or Managers of Personal Service Workers	$ 14.00	$ 12.00	$ 24.04	39.5
87	Medical and Health Services Managers	$ 20.00	$ 14.00	$ 30.00	39.42
88	Metal and Plastic Computer-Controlled Machine Tool Operators	$ 12.00	$ 10.00	$ 16.00	39.27
89	Social and Human Service Assistants	$ 16.00	$ 10.00	$ 17.00	39.12
90	Kindergarten Teachers (Except Special Education)	N/A	N/A	N/A	39.12
91	Computer System Software Engineers	N/A	N/A	N/A	38.63
92	School Administrators (Elementary and Secondary)	$ 31.25	$ 25.96	$ 38.46	37.67
93	Word Processors and Typists	$ 10.50	$ 5.15	$ 15.38	37.36
94	Foremen of Production and Operating Workers	$ 14.50	$ 9.62	$ 24.04	37.29
95	New Accounts Clerks	$ 9.50	$ 9.00	$ 12.02	37.09
96	First-Line Administrative Support Supervisors	$ 13.22	$ 9.00	$ 24.04	37.08
97	Billing and Posting Clerks	$ 11.25	$ 8.00	$ 15.00	36.65
98	Logisticians	$ -	$ -	$ -	36.57
99	Electricians	$ 18.00	$ 10.00	$ 27.94	36.56
100	Retail Sales Managers	$ 14.42	$ 10.00	$ 25.00	36.55

Source: Indiana Department of Workforce Development - ERISS Survey.

Table B 13: Best Paying Occupations, Experience Required - New Hires

STATEWIDE OCCUPATIONS: BEST PAYING, EXPERIENCED, NEW HIRE				
Occupation Title	Median Hourly Wage	Low Wage	High Wage	Average Days to Fill Position
1 Physical Therapists	$ 35.00	$ 21.00	$ 46.00	129.78
2 School Administrators (Elementary and Secondary)	$ 31.25	$ 25.96	$ 38.46	37.67
3 Engineering Managers	$ 26.44	$ 14.42	$ 33.65	87.78
4 Construction Managers	$ 24.04	$ 12.95	$ 36.06	70.17
5 Foremen, Construction, Mining and Drilling Work Crews	$ 23.50	$ 15.00	$ 30.00	25.05
6 Mechanical Engineers	$ 23.08	$ 14.00	$ 33.65	72.28
7 Financial Analysts	$ 22.84	$ 11.56	$ 35.00	97.22
8 Computer Programmers	$ 22.12	$ 12.02	$ 28.85	55.14
9 Cost Estimators	$ 21.63	$ 12.50	$ 40.00	98.7
10 Computer Systems Analysts	$ 21.63	$ 14.42	$ 26.44	59.4
11 Registered Nurses (Nurse Practitioners)	$ 20.24	$ 16.00	$ 28.00	67.43
12 Medical and Health Services Managers	$ 20.00	$ 14.00	$ 30.00	39.42
13 Diesel Engine Mechanics	$ 19.50	$ 10.00	$ 24.04	43.4
14 Heavy and Tractor-Trailer Truck Drivers	$ 19.50	$ 10.00	$ 31.25	17.09
15 Marketing Managers	$ 19.23	$ 14.00	$ 41.09	67.8
16 Database Administrators	$ 19.23	$ 10.00	$ 26.44	56.14
17 Health and Safety Engineers (Except Mining Safety Engineers and Inspectors)	$ 19.23	$ 15.00	$ 24.04	62.42
18 Sales Engineers	$ 19.23	$ 12.02	$ 38.46	67.15
19 Radiologic Technologists and Technicians	$ 19.00	$ 16.83	$ 20.00	120
20 Cement Masons and Concrete Finishers	$ 19.00	$ 11.00	$ 25.00	8.68
21 Cargo and Freight Agents	$ 18.75	$ 11.00	$ 26.44	15.55
22 Public Relations Managers	$ 18.27	$ 9.62	$ 39.42	48.68
23 First-Line Supervisors or Managers of Transportation and Material-Moving Ma	$ 18.13	$ 14.42	$ 25.00	34.65
24 Industrial Production Managers	$ 18.03	$ 12.00	$ 38.46	68.93
25 Purchasing Agents (Except Wholesale, Retail, and Farm Products)	$ 18.00	$ 8.00	$ 28.85	53.4
26 Electrical & Electronic Engineering Technicians	$ 18.00	$ 12.00	$ 31.25	17.28
27 Construction Heavy Equipment Operators	$ 18.00	$ 10.95	$ 28.00	12.87
28 Electricians	$ 18.00	$ 10.00	$ 27.94	36.56
29 First-Line Supervisors or Managers of Non-Retail Sales Workers	$ 17.79	$ 11.00	$ 24.04	54.17
30 First-Line Supervisors of Customer Service / Call Center	$ 17.79	$ 9.13	$ 30.00	66.79
31 Respiratory Therapists	$ 17.31	$ 15.00	$ 20.00	93.23
32 Master Mechanics, (Automotive)	$ 17.00	$ 14.00	$ 20.00	24.82
33 Financial Managers, Branch Or Department	$ 16.83	$ 14.42	$ 36.06	61.9
34 Human Resources Managers	$ 16.83	$ 10.00	$ 26.44	64.17
35 Transportation, Storage, and Distribution Managers	$ 16.83	$ 9.00	$ 24.04	75.66
36 Budget Analysts	$ 16.83	$ 14.00	$ 28.85	49.97
37 Industrial Machinery Mechanics	$ 16.83	$ 10.50	$ 20.72	44.89
38 Machinery Maintenance Worker	$ 16.50	$ 8.50	$ 21.14	53.5
39 Social and Human Service Assistants	$ 16.00	$ 10.00	$ 17.00	39.12
40 Carpenters	$ 16.00	$ 12.00	$ 23.00	15.42
41 Lathe and Turning Machine Tool Operators (Metal and Plastic)	$ 16.00	$ 10.00	$ 21.00	35.65
42 Advertising and Promotions Managers	$ 15.50	$ 9.62	$ 33.65	44.45
43 Mechanical Drafters	$ 15.38	$ 12.00	$ 22.00	54.5
44 Medical Transcriptionists	$ 15.38	$ 9.80	$ 15.38	0
45 Tool and Die Makers	$ 15.38	$ 12.13	$ 23.00	71.78
46 Sales Managers	$ 15.00	$ 12.02	$ 38.46	69.4
47 Administrative Services/Office Managers	$ 15.00	$ 9.00	$ 24.04	60.64
48 Computer and Information Systems Managers	$ 15.00	$ 12.00	$ 38.46	52.77
49 Licensed Practical and Licensed Vocational Nurses	$ 15.00	$ 12.00	$ 19.50	30.45
50 Construction Laborers	$ 15.00	$ 8.50	$ 24.00	8.95
Source: Indiana Department of Workforce Development - ERISS Survey.				

Table B 14: Statewide Occupations – Ranked by Time to Fill No-Experience Required Positions

STATEWIDE OCCUPATIONS: TIME TO FILL NO-EXPERIENCE REQUIRED POSITIONS					
	Occupation Title	Median Hourly Wage	Low Wage	High Wage	Average Days to Fill Position
1	Respiratory Therapists	$ 15.87	$ 11.97	$ 17.00	102.44
2	Sales Managers	N/A	N/A	N/A	89
3	First-Line Supervisors of Customer Service / Call Center	$ 14.42	$ 8.00	$ 19.23	87.38
4	Radiologic Technologists and Technicians	$ 16.83	$ 15.00	$ 18.00	86.56
5	Human Resources Managers	N/A	N/A	N/A	86.22
6	School Bus Drivers	N/A	N/A	N/A	85.36
7	Cost Estimators	N/A	N/A	N/A	83.4
8	Reporters and Correspondents	$ 9.62	$ 7.00	$ 12.02	62.11
9	First-Line Supervisors or Managers of Transportation and Material-Moving Ma	$ 14.42	$ 10.00	$ 24.04	60.89
10	Sales Engineers	$ 19.23	$ 10.00	$ 21.63	59.3
11	Registered Nurses (Nurse Practitioners)	$ 18.00	$ 12.00	$ 19.09	58.44
12	Heavy and Tractor-Trailer Truck Drivers	$ 16.83	$ 9.00	$ 17.30	55.27
13	Human Resources Assistants (Except Payroll and Timekeeping)	$ 12.00	$ 9.00	$ 20.00	54.27
14	Retail Sales Managers	N/A	N/A	N/A	48.29
15	Executive Secretaries and Administrative Assistants	$ 10.00	$ 8.00	$ 20.00	47.8
16	Special Education Teachers	$ 14.42	$ 13.46	$ 15.38	45.84
17	Sales Representatives	$ 13.94	$ 7.50	$ 19.23	45.44
18	New Accounts Clerks	$ 8.00	$ 7.50	$ 10.00	44.77
19	Bookkeeping, Accounting, and Auditing Clerks	$ 12.00	$ 7.50	$ 15.00	43.57
20	Clinical, Counseling, and School Psychologists	N/A	N/A	N/A	42.8
21	Recreational Therapists	$ 8.00	$ 7.00	$ 9.00	39.49
22	Computer and Information Systems Managers	N/A	N/A	N/A	39.12
23	Order Clerks	$ 9.00	$ 5.15	$ 14.42	38.01
24	Mechanical Engineers	N/A	N/A	N/A	37.4
25	Word Processors and Typists	$ 7.69	$ 5.15	$ 10.58	37.2
26	Library Technicians (Reference Assistants)	$ 8.00	$ 6.63	$ 10.58	37.14
27	Kindergarten Teachers (Except Special Education)	$ 14.42	$ 13.46	$ 15.38	36.88
28	Licensed Practical and Licensed Vocational Nurses	$ 15.00	$ 10.00	$ 17.00	36.25
29	Welders, Cutters, Solderers, and Brazers	$ 10.00	$ 8.00	$ 13.00	35.11
30	Metal and Plastic Rolling Machine Operators	$ 8.50	$ 7.00	$ 13.50	34.7
31	Elementary and Middle School Teachers	$ 14.42	$ 13.46	$ 15.38	32.61
32	Parts Salespersons	$ 9.00	$ 8.00	$ 14.42	32.34
33	Billing and Posting Clerks	$ 11.00	$ 7.00	$ 13.00	32.23
34	School Administrators (Elementary and Secondary)	N/A	N/A	N/A	32.15
35	Advertising Sales Agents	$ 10.00	$ 8.13	$ 18.27	32.11
36	Cargo and Freight Agents	N/A	N/A	N/A	31.8
37	Forging Machine Operators (Metal and Plastic)	$ 11.00	$ 7.50	$ 14.00	31.72
38	Food Service Managers	$ 9.00	$ 6.50	$ 11.00	31.56
39	Loan Clerks and Interviewers	$ 8.00	$ 7.69	$ 12.00	31.25
40	Secondary School Teachers (Except Special and Vocational Education)	$ 14.42	$ 13.46	$ 15.38	30.93
41	Counter and Rental Clerks	$ 8.00	$ 5.50	$ 12.00	30.9
42	Payroll and Timekeeping Clerks	$ 11.00	$ 8.17	$ 18.00	30
43	Molding, Coremaking, and Casting Machine Operators	$ 9.00	$ 6.30	$ 10.25	29.8
44	Tellers	$ 7.50	$ 6.50	$ 9.00	29.68
45	Carpenters	$ 11.00	$ 9.62	$ 13.28	29.56
46	Metal and Plastic Computer-Controlled Machine Tool Operators	$ 10.00	$ 9.50	$ 13.01	29.55
47	General Maintenance and Repair Workers	$ 10.00	$ 5.15	$ 19.00	29.08
48	First-Line Administrative Support Supervisors	$ 10.00	$ 8.00	$ 19.23	28.76
49	General Office Clerks	$ 8.65	$ 6.00	$ 14.50	27.64
50	Inspectors, Testers, Sorters, Samplers, and Weighers	$ 9.63	$ 6.00	$ 15.00	27.18

Source: Indiana Department of Workforce Development - ERISS Survey.

Table B 15: Best Paying Occupations, No-Experience Required - New Hires

STATEWIDE OCCUPATIONS: BEST PAYING, NON-EXPERIENCED, NEW HIRE				
Occupation Title	Median Hourly Wage	Low Wage	High Wage	Average Days to Fill Position
1 Sales Engineers	$ 19.23	$ 10.00	$ 21.63	59.3
2 Registered Nurses (Nurse Practitioners)	$ 18.00	$ 12.00	$ 19.09	58.44
3 Construction Heavy Equipment Operators	$ 17.00	$ 10.95	$ 20.33	0
4 Radiologic Technologists and Technicians	$ 16.83	$ 15.00	$ 18.00	86.56
5 Marketing Managers	$ 16.83	$ 12.00	$ 36.06	0
6 Heavy and Tractor-Trailer Truck Drivers	$ 16.83	$ 9.00	$ 17.30	55.27
7 Respiratory Therapists	$ 15.87	$ 11.97	$ 17.00	102.44
8 Speech or Language Pathologists	$ 15.38	$ 12.02	$ 16.83	0
9 Licensed Practical and Licensed Vocational Nurses	$ 15.00	$ 10.00	$ 17.00	36.25
10 Machinery Maintenance Worker	$ 14.50	$ 7.25	$ 14.70	19.4
11 Special Education Teachers	$ 14.42	$ 13.46	$ 15.38	45.84
12 Secondary School Teachers (Except Special and Vocational Education)	$ 14.42	$ 13.46	$ 15.38	30.93
13 Kindergarten Teachers (Except Special Education)	$ 14.42	$ 13.46	$ 15.38	36.88
14 First-Line Supervisors or Managers of Transportation and Material-Moving Ma	$ 14.42	$ 10.00	$ 24.04	60.89
15 First-Line Supervisors of Customer Service / Call Center	$ 14.42	$ 8.00	$ 19.23	87.38
16 Elementary and Middle School Teachers	$ 14.42	$ 13.46	$ 15.38	32.61
17 Librarians	$ 14.18	$ 10.50	$ 15.38	0
18 Sales Representatives	$ 13.94	$ 7.50	$ 19.23	45.44
19 Truck Drivers, Light Or Delivery Services	$ 12.50	$ 7.50	$ 21.63	22.82
20 Dispatchers (Except Police, Fire, and Ambulance)	$ 12.50	$ 8.50	$ 16.83	8.8
21 Loan Officers and Counselors	$ 12.02	$ 9.62	$ 14.42	10.17
22 First-Line Supervisors or Managers of Non-Retail Sales Workers	$ 12.02	$ 9.62	$ 13.46	20.64
23 Accountants	$ 12.02	$ 9.62	$ 18.00	19.33
24 Human Resources Assistants (Except Payroll and Timekeeping)	$ 12.00	$ 9.00	$ 20.00	54.27
25 Construction Laborers	$ 12.00	$ 8.00	$ 20.00	7.82
26 Bookkeeping, Accounting, and Auditing Clerks	$ 12.00	$ 7.50	$ 15.00	43.57
27 Bill and Account Collectors	$ 12.00	$ 6.63	$ 14.74	25.63
28 Amusement and Recreation Attendants	$ 12.00	$ 5.15	$ 18.00	16.05
29 Computer Support/Help Desk Specialist	$ 11.54	$ 6.00	$ 14.42	25.26
30 Foremen of Helpers, Laborers, and Material Movers	$ 11.25	$ 7.00	$ 21.63	11.58
31 Payroll and Timekeeping Clerks	$ 11.00	$ 8.17	$ 18.00	30
32 Forging Machine Operators (Metal and Plastic)	$ 11.00	$ 7.50	$ 14.00	31.72
33 Carpenters	$ 11.00	$ 9.62	$ 13.28	29.56
34 Billing and Posting Clerks	$ 11.00	$ 7.00	$ 13.00	32.23
35 Packaging and Filling Machine Operators and Tenders	$ 10.36	$ 5.65	$ 13.00	11.81
36 Welders, Cutters, Solderers, and Brazers	$ 10.00	$ 8.00	$ 13.00	35.11
37 Transportation, Storage, and Distribution Managers	$ 10.00	$ 8.00	$ 15.00	13.16
38 Sheet Metal Workers	$ 10.00	$ 8.50	$ 12.25	8.54
39 Purchasing Agents (Except Wholesale, Retail, and Farm Products)	$ 10.00	$ 8.00	$ 19.23	24.91
40 Multiple Machine Tool Operators (Metal and Plastic)	$ 10.00	$ 7.00	$ 11.85	16.94
41 Mixing and Blending Machine Operators	$ 10.00	$ 7.50	$ 12.02	24.73
42 Metal and Plastic Computer-Controlled Machine Tool Operators	$ 10.00	$ 9.50	$ 13.01	29.55
43 Machinists	$ 10.00	$ 8.00	$ 12.00	23.67
44 General Maintenance and Repair Workers	$ 10.00	$ 5.15	$ 19.00	29.08
45 Forklift Operators (Industrial Truck and Tractor)	$ 10.00	$ 6.00	$ 14.85	23.14
46 Foremen of Production and Operating Workers	$ 10.00	$ 8.00	$ 17.00	16.77
47 First-Line Administrative Support Supervisors	$ 10.00	$ 8.00	$ 19.23	28.76
48 Executive Secretaries and Administrative Assistants	$ 10.00	$ 8.00	$ 20.00	47.8
49 Crushing, Grinding, and Polishing Machine Operators	$ 10.00	$ 8.00	$ 16.65	10.52
50 Advertising Sales Agents	$ 10.00	$ 8.13	$ 18.27	32.11
Source: Indiana Department of Workforce Development - ERISS Survey.				

APPENDIX C – KEY EMPLOYER PARTICIPATION AND DISTRIBUTION LIST

Company	Address	City	Zip
AirGuard of Indiana	2234 E. Market St.	New Albany	47150
Akin Medical Center	2019 State St	New Albany	47150
Amatrol Inc	2400 Centennial Blvd	Jeffersonville	47131
American Commercial Lines Llc	1701 Utica Pike	Jeffersonville	47131
American Plastic Molding Corp	965 S Elm St	Scottsburg	47170
American Steel Cord	1010 West Weir Road	Scottsburg	47170
Austin Tri-Hawk Automotive	2001 W Just Indus Pkwy	Austin	47102
Autumn Woods Health Care	2911 Green Valley Rd	New Albany	47150
Awningtec USA Inc.	3265 Hwy 62 NW	Corydon	47112
Baylor Intermodal Inc	5601 Highway 31 E Bldg E	Clarksville	47129
Beach Mold & Tool	999 Progress Blvd.	New Albany	47150
Bert R Huncilman & Son Inc	115 Security Pkwy	New Albany	47151
Blue River Cabinetry	7944 S. West Washington School Roa	Fredericksburg	47120
Bush Trucking	7795 Highway 135 NE	New Salisbury	47161
Cancer Care Center, Inc.	2210 Green Valley Road Ste 1	New Albany	47150
Carman Industries Inc	1005 W Riverside Dr	Jeffersonville	47131
Champion Wood Products	539 Champion Rd	Jeffersonville	47130
Chemtrusion-Indiana	1403 Port Rd	Jeffersonville	47130
Clark Maritime Center	5100 Port Road	Jeffersonville	47130
Clark Memorial Hospital	1220 Missouri Ave	Jeffersonville	47131
Colgate-Palmolive	P.O. Box CS9	Jeffersonville	47130
Community Medical Associates	2051 Clevidence Blvd.	Clarksville	47129
Conforma Clad Inc	501 Park East Blvd	New Albany	47150
Consolidated Grain & Barge Co	5130 Port Rd	Jeffersonville	47130
Corydon Machine And Tool Co	615 Quarry Rd Nw	Corydon	47112
Corydon Nursing & Rehab Ctr	315 Country Club Road	Corydon	47112
Dallas Group Of America Inc	1402 Fabricon Blvd	Jeffersonville	47130
Daramic LLC	3430 Cline Road	Corydon	47112
Derby Industries	2276 South US Hwy 31	Scottsburg	47170
E M Cummings Veneers Inc	601 E 4Th St	New Albany	47151
Eagle Steel Products Inc	5150 Loop Rd	Jeffersonville	47130
Essroc Cement Corp	301 Highway 31	Sellersburg	47172
Expedited Logistics Inc.	7000 Airport Drive Ste 200	Sellersburg	47172
Fabri-Form	540 E. St. Road 60	Pekin	47165
Fewell Monument Company	161 W. McClain Ave	Scottsburg	47170
FKI Security Group	101 Security Pkwy	New Albany	47151
Flexcel-Borden	555 E Water St	Borden	47106
Flexcel-Salem	200 Kimball Blvd.	Salem	47167
Floyd Mem Hosp & Hlth Svcs	1850 State St	New Albany	47150
Foam Fabricators	950 Progress Blvd	New Albany	47150
Fox Group Inc	1909 Mcdonald Ln	New Albany	47151
Frank Miller Lumber Company	7016 E. Old 56	Salem	47167
Freudenberg-Nok	821 S Lake Rd S	Scottsburg	47170
Frozen Food Service	195 W. Joseph Street	Salem	47167
Genesis Plastics & Engrg Llc	640 N Wilson Rd	Scottsburg	47170
Genpak Llc	845 S Elm St	Scottsburg	47170
GKN Sinter Metals Inc	Becks Mill Rd	Salem	47167
Harrison County Hospital	245 Atwood St. Ste 2	Corydon	47112
Hawk Precision Components	596 W. Oak Street	Campbellsburg	47108
Hitachi Cable Indiana Inc	5300 Grant Line Rd	New Albany	47150
Holm Industries Inc	745 S Gardner St	Scottsburg	47170
Hoosier Precast LLC	200 Tarr Ave.	Salem	47167
ICON Metal Forming LLC	2190 Landmark Ave Ne	Corydon	47112
Jasper Engine Exchange Inc	6400 E Industrial Ln	Leavenworth	47137
Jeans Extrusion Inc	201 Jeans Drive	Salem	47167
JEG Wood Products LLC	3789 S. Magnolia Road	English	47118
Kellems & Coe Tool Corporation	2200 Centennial Blvd.	Jeffersonville	47130
Key Electronics	2633 Grant Line Rd	New Albany	47151
Kindred Campus Corydon	150 Beechmont Drive	Corydon	47112
Kitchen Kompact Inc	911 E 11Th St	Jeffersonville	47131
Koetter Woodworking	533 Louis Smith Rd.	Borden	47106
Lucas Oil Products Inc.	3199 Harrison Way	Corydon	47112
Marengo Warehouse	300 E Union St	Marengo	47140
McDonald Marble & Stone	5313 Foundation Blvd.	New Albany	47150
Medical Ctr. of Southern Indiana	2200 Market St	Charlestown	47111
Mikrotek Inc	110 E Progress Blvd	Salem	47167
MKM Machine Tool Co Inc	100 Technology Way	Jeffersonville	47131
Morgan Foods Inc	90 W Morgan St	Austin	47102

Company	Address	City	Zip
Mould-Rite Inc	5885 E Old Pekin Rd	Pekin	47165
Mulzer - Cape Sandy Quarry	19925 S Alton Fredonia Rd	Leavenworth	47137
Mulzer - Temple Quarry	2785 E. Temple Road	English	47118
Mulzer - Tower Quarry	7172 S. Tower Road	Leavenworth	47137
Norstam Veneers	P.O. Box 32	Mauckport	47142
Owen's Machinery Inc.	3190 Fogel Road	Corydon	47112
Pepsi Americas	1402 West SR 256	Austin	47102
Pillsbury	707 Pillsbury Ln	New Albany	47150
Precision Automation	2120 Addmore Lane	Clarksville	47129
Radiology Associates	1214 Spring St Ste 2	Jeffersonville	47130
Ramsey Popcorn Co. Inc.	5645 Clover Valley Road NW	Ramsey	47166
Samtec Inc.	520 Park E. Blvd.	New Albany	47150
Saroyan Hardwoods Inc	22 N Jefferson St	Pekin	47165
Scansteel Service Center Inc	5150 Maritime	Jeffersonville	47130
Schmidt Cabinet Co. Inc.	P.O. Box 68	New Salisbury	47161
Scott County Memorial Hospital	1451 N Gardner St	Scottsburg	47170
Scottsburg Plastics Inc	1250 S Bond St	Scottsburg	47170
Selectron Inc.	4235 Earnings Way	New Albany	47150
Smith Store Fixtures Inc	6405 Highway 337 NE	Depauw	47115
Sodrel Truck Lines Inc	1 Sodrel Dr	Clarksville	47129
Southern Indiana Plastics	1606 Dutch Lane	Jeffersonville	47130
Southern Indiana Rehab Hosp	3104 Blackiston Blvd	New Albany	47150
Space Hrdware Optmization Tech	7200 Highway 150	Greenville	47124
Speed Flex Inc.	8350 Clover Valley Road	Ramsey	47166
Spencer Machine & Tool	6205 Gheens Mill Road	Jeffersonville	47130
Stemwood Corporation	2710 Grant Line Rd	New Albany	47150
Summitt Trucking Llc	P O Box 339	Jeffersonville	47131
Surgical Center of New Albany	2201 Green Valley Road	New Albany	47150
Techne Engineering	3597 S Double Or Nothing	Scottsburg	47170
Tecumseh Power Company	1555 S Jackson St	Salem	47167
Total Concepts Design Inc	1054 S Taylor Mill Rd	Scottsburg	47170
Tyson Foods Inc	P.O. Box 430	Corydon	47112
UPS	2234 Koetter Dr	Clarksville	47129
Voss Clark	701 Loop Road	Jeffersonville	47130
Washington County Hospital	911 N. Shelby Street	Salem	47167
Wellstone Regional Hosp Llc	2700 Vissing Park Rd	Jeffersonville	47130
Westminster Vlg Kentuckiana	2200 Greentree N	Clarksville	47129
Wyandot Inc	125 Peacely St	Jeffersonville	47130